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JOHN WHALLEY, Research Coordinator

Canada—United States Free Trade

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Canada-United States Free Trade





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This is Volume 11 in the series of studies commissioned as part of the research program of the Royal Commission on the Economic Union and Development Prospects for Canada.

The views expressed in the studies are those of the authors and are not necessarily endorsed by the Chairman or Commissioners.



Canada-United States Free Trade

JOHN WHALLEY
Research Coordinator

with

RODERICK HILL



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CONTENTS



FOREWORD *vii*

INTRODUCTION *ix*

ACKNOWLEDGMENTS *xiii*

1. **Introduction: Canada-U.S. Free Trade** *1*
Roderick Hill and John Whalley
2. **A Possible Canada-U.S. Free Trade Arrangement: A Summary of the Proceedings of a Research Symposium** *43*
Roderick Hill and John Whalley
3. **Potential Economic Effects of a Canada-U.S. Free Trade Agreement** *67*
Ronald J. Wonnacott
4. **Reservations Concerning a Free Trade Area** *85*
Mel Watkins
5. **Some Comments on Canada-U.S. Free Trade** *91*
Bruce W. Wilkinson
6. **U.S.-Canada Free Trade: An American View** *103*
William Diebold
7. **Canadian Gains from Trade in the Presence of Scale Economies and Imperfect Competition** *113*
James R. Markusen
8. **Summary of a Project on the General Equilibrium Evaluation of Canadian Trade Policy** *157*
Richard G. Harris

9. **The Relationship between Trade and Tariff Patterns and the Efficiency of the Canadian Manufacturing Sector in the 1970s: A Summary** 179
John Baldwin and Paul K. Gorecki
10. **The Impact of Trade Liberalization on Foreign Direct Investment Flows** 193
David F. Burgess
- 11. **U.S. Trade Policies and Canadian Interests: Summary of the Proceedings of a Research Symposium** 201
Colleen Hamilton and John Whalley
12. **The Future of U.S. Trade Policy** 215
Raymond J. Ahearn and Alfred Reifman
13. **Trends in U.S. Trade Policy and Non-Tariff Barriers** 223
Peter Morici
14. **Some Observations on Non-Tariff Barriers and their Use in Canada** 239
Andrew Moroz
15. **Issues in Canadian Agricultural Trade Policy** 267
Thorald K. Warley
- 16. **Regional Considerations and Canadian Trade Policies: Summary of the Proceedings of a Research Symposium** 295
Colleen Hamilton and John Whalley
17. **The Regional Impact of Tariffs** 313
James R. Melvin
18. **Regionalism and International Trade Policy** 325
Ronald A. Shearer
19. **U.S.-Canada Free Trade: A View from the East** 369
John F. Earl
- ABOUT THE CONTRIBUTORS** 373



When the members of the Rowell-Sirois Commission began their collective task in 1937, very little was known about the evolution of the Canadian economy. What was known, moreover, had not been extensively analyzed by the slender cadre of social scientists of the day.

When we set out upon our task nearly 50 years later, we enjoyed a substantial advantage over our predecessors; we had a wealth of information. We inherited the work of scholars at universities across Canada and we had the benefit of the work of experts from private research institutes and publicly sponsored organizations such as the Ontario Economic Council and the Economic Council of Canada. Although there were still important gaps, our problem was not a shortage of information; it was to interrelate and integrate — to synthesize — the results of much of the information we already had.

The mandate of this Commission is unusually broad. It encompasses many of the fundamental policy issues expected to confront the people of Canada and their governments for the next several decades. The nature of the mandate also identified, in advance, the subject matter for much of the research and suggested the scope of enquiry and the need for vigorous efforts to interrelate and integrate the research disciplines. The resulting research program, therefore, is particularly noteworthy in three respects: along with original research studies, it includes survey papers which synthesize work already done in specialized fields; it avoids duplication of work which, in the judgment of the Canadian research community, has already been well done; and, considered as a whole, it is the most thorough examination of the Canadian economic, political and legal systems ever undertaken by an independent agency.

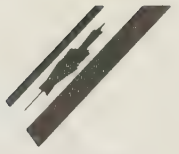
The Commission's research program was carried out under the joint direction of three prominent and highly respected Canadian scholars: Dr. Ivan Bernier (*Law and Constitutional Issues*), Dr. Alan Cairns (*Politics and Institutions of Government*) and Dr. David C. Smith (*Economics*).

Dr. Ivan Bernier is Dean of the Faculty of Law at Laval University. Dr. Alan Cairns is former Head of the Department of Political Science at the University of British Columbia and, prior to joining the Commission, was William Lyon Mackenzie King Visiting Professor of Canadian Studies at Harvard University. Dr. David C. Smith, former Head of the Department of Economics at Queen's University in Kingston, is now Principal of that University. When Dr. Smith assumed his new responsibilities at Queen's in September, 1984, he was succeeded by Dr. Kenneth Norrie of the University of Alberta and John Sargent of the federal Department of Finance, who together acted as Co-directors of Research for the concluding phase of the Economics research program.

I am confident that the efforts of the Research Directors, research coordinators and authors whose work appears in this and other volumes, have provided the community of Canadian scholars and policy makers with a series of publications that will continue to be of value for many years to come. And I hope that the value of the research program to Canadian scholarship will be enhanced by the fact that Commission research is being made available to interested readers in both English and French.

I extend my personal thanks, and that of my fellow Commissioners, to the Research Directors and those immediately associated with them in the Commission's research program. I also want to thank the members of the many research advisory groups whose counsel contributed so substantially to this undertaking.

DONALD S. MACDONALD



At its most general level, the Royal Commission's research program has examined how the Canadian political economy can better adapt to change. As a basis of enquiry, this question reflects our belief that the future will always take us partly by surprise. Our political, legal and economic institutions should therefore be flexible enough to accommodate surprises and yet solid enough to ensure that they help us meet our future goals. This theme of an adaptive political economy led us to explore the interdependencies between political, legal and economic systems and drew our research efforts in an interdisciplinary direction.

The sheer magnitude of the research output (more than 280 separate studies in 72 volumes) as well as its disciplinary and ideological diversity have, however, made complete integration impossible and, we have concluded, undesirable. The research output as a whole brings varying perspectives and methodologies to the study of common problems and we therefore urge readers to look beyond their particular field of interest and to explore topics across disciplines.

The three research areas, — *Law and Constitutional Issues*, under Ivan Bernier; *Politics and Institutions of Government*, under Alan Cairns; and *Economics*, under David C. Smith (co-directed with Kenneth Norrie and John Sargent for the concluding phase of the research program) — were further divided into 19 sections headed by research coordinators.

The area *Law and Constitutional Issues* has been organized into five major sections headed by the research coordinators identified below.

- Law, Society and the Economy — *Ivan Bernier and Andrée Lajoie*
- The International Legal Environment — *John J. Quinn*
- The Canadian Economic Union — *Mark Krasnick*
- Harmonization of Laws in Canada — *Ronald C.C. Cuming*
- Institutional and Constitutional Arrangements — *Clare F. Beckton and A. Wayne MacKay*

Since law in its numerous manifestations is the most fundamental means of implementing state policy, it was necessary to investigate how and when law could be mobilized most effectively to address the problems raised by the Commission's mandate. Adopting a broad perspective, researchers examined Canada's legal system from the standpoint of how law evolves as a result of social, economic and political changes and how, in turn, law brings about changes in our social, economic and political conduct.

Within *Politics and Institutions of Government*, research has been organized into seven major sections.

- Canada and the International Political Economy — *Denis Stairs and Gilbert Winham*
- State and Society in the Modern Era — *Keith Banting*
- Constitutionalism, Citizenship and Society — *Alan Cairns and Cynthia Williams*
- The Politics of Canadian Federalism — *Richard Simeon*
- Representative Institutions — *Peter Aucoin*
- The Politics of Economic Policy — *G. Bruce Doern*
- Industrial Policy — *André Blais*

This area examines a number of developments which have led Canadians to question their ability to govern themselves wisely and effectively. Many of these developments are not unique to Canada and a number of comparative studies canvass and assess how others have coped with similar problems. Within the context of the Canadian heritage of parliamentary government, federalism, a mixed economy, and a bilingual and multicultural society, the research also explores ways of rearranging the relationships of power and influence among institutions to restore and enhance the fundamental democratic principles of representativeness, responsiveness and accountability.

Economics research was organized into seven major sections.

- Macroeconomics — *John Sargent*
- Federalism and the Economic Union — *Kenneth Norrie*
- Industrial Structure — *Donald G. McFetridge*
- International Trade — *John Whalley*
- Income Distribution and Economic Security — *François Vaillancourt*
- Labour Markets and Labour Relations — *Craig Riddell*
- Economic Ideas and Social Issues — *David Laidler*

Economics research examines the allocation of Canada's human and other resources, the ways in which institutions and policies affect this allocation, and the distribution of the gains from their use. It also considers the nature of economic development, the forces that shape our regional and industrial structure, and our economic interdependence with other countries. The thrust of the research in economics is to

increase our comprehension of what determines our economic potential and how instruments of economic policy may move us closer to our future goals.

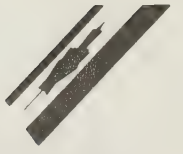
One section from each of the three research areas — The Canadian Economic Union, The Politics of Canadian Federalism, and Federalism and the Economic Union — have been blended into one unified research effort. Consequently, the volumes on Federalism and the Economic Union as well as the volume on The North are the results of an interdisciplinary research effort.

We owe a special debt to the research coordinators. Not only did they organize, assemble and analyze the many research studies and combine their major findings in overviews, but they also made substantial contributions to the Final Report. We wish to thank them for their performance, often under heavy pressure.

Unfortunately, space does not permit us to thank all members of the Commission staff individually. However, we are particularly grateful to the Chairman, The Hon. Donald S. Macdonald; the Commission's Executive Director, J. Gerald Godsoe; and the Director of Policy, Alan Nymark, all of whom were closely involved with the Research Program and played key roles in the contribution of Research to the Final Report. We wish to express our appreciation to the Commission's Administrative Advisor, Harry Stewart, for his guidance and advice, and to the Director of Publishing, Ed Matheson, who managed the research publication process. A special thanks to Jamie Benidickson, Policy Coordinator and Special Assistant to the Chairman, who played a valuable liaison role between Research and the Chairman and Commissioners. We are also grateful to our office administrator, Donna Stebbing, and to our secretarial staff, Monique Carpentier, Barbara Cowtan, Tina DeLuca, Françoise Guilbault and Marilyn Sheldon.

Finally, a well deserved thank you to our closest assistants: Jacques J.M. Shore, *Law and Constitutional Issues*; Cynthia Williams and her successor Karen Jackson, *Politics and Institutions of Government*; and I. Lilla Connidis, *Economics*. We appreciate not only their individual contribution to each research area, but also their cooperative contribution to the research program and the Commission.

IVAN BERNIER
ALAN CAIRNS
DAVID C. SMITH



ACKNOWLEDGMENTS

Many people were involved in the trade policy research effort in the economics branch of the Commission's research program and we would like to acknowledge their help. The Commission's Research Advisory Group on Trade Policy (Economics) provided valuable assistance in selecting the topics to be covered and in commenting on papers and on the issues before the Commission. They also participated extensively in the research symposia held by the Commission on trade policy topics.

The following were the members of the group: Peter Cornell (Economic Council of Canada), John Curtis (Institute for Research on Public Policy), Richard G. Harris (Queen's University), Gerald K. Helleiner (University of Toronto), James Markusen (University of Western Ontario), Ronald McKinnon (Stanford University), A. Edward Safarian (University of Toronto), Ronald Shearer (University of British Columbia), Rodrigue Tremblay (University of Montreal), Bruce W. Wilkinson (University of Alberta) and Ronald Wonnacott (University of Western Ontario).

We are grateful for the assistance of the Commission's economic research staff, particularly Dr. I. Lilla Connidis, Barbara Cowtan, Tina De Luca, Donna Stebbing and Marilyn Sheldon, and Donald Wilson of the Institute for Research on Public Policy. We also acknowledge the support and guidance of David Smith, John Sargent and Kenneth Norrie, co-directors of research in economics for the Commission. We are particularly grateful to Ruth Crow, the editor of the economics volumes on trade policy.

J. W.



Canada-U.S. Free Trade: An Introduction

RODERICK HILL AND
JOHN WHALLEY

This volume contains the research papers which have been commissioned by the Research Advisory Group on Trade Policy (Economics) on the issues surrounding a possible Canada-U.S. free trade agreement. The papers are of three types: commissioned research studies, staff papers which summarize the proceedings of three research symposia, and a selection of the papers presented at these symposia. At each symposium, participants were invited to present short papers based on their existing work relevant to the issues being discussed. Many of these proved to be extremely helpful both to the Commission staff and to Commissioners in drawing together the thinking of the wider research community on issues surrounding Canada-U.S. free trade. Therefore, slightly longer and revised versions of some of these have been included here to help focus the debate which we expect will follow publication of the Commission's report and research output.

The three appendices attached to this introduction deal with the more technical aspects of the issues. Appendix A presents the basic diagrammatic arguments surrounding the Canada-U.S. free trade question. Appendix B reviews previous studies of the possible size of long-run benefits to Canada. Appendix C surveys studies of adjustment costs under bilateral and other forms of trade liberalization.

Arguments Surrounding Canada-U.S. Free Trade

Previous Debates

An understanding of the history of trade policies between Canada and the United States is crucial to any useful discussion of the present consideration of Canada-U.S. free trade.

Prior to Confederation, Canada had a free trade treaty with the United States. Termination of this treaty in 1866 was one of the factors leading to the British North America Act of 1867. In the immediate post-Confederation period, a number of unsuccessful attempts were made to negotiate free trade arrangements with the United States and also with the United Kingdom. Lack of success in these attempts led to the National Policy of 1879, a policy of high tariffs on imports of manufactured goods. The main objective of the National Policy was to generate secure domestic markets for Canadian manufacturing industries behind a protective trade barrier, in order to encourage the industrialization of the country.

Even at the time, the National Policy was seen very much as second best to a free trade arrangement with the United States. However, the policy generated its own political dynamic which subsequently polarized opinion on the free trade issue. The election of 1911, in particular, was fought on the issue of a reciprocal trade treaty with the United States. Those opposed to bilateral free trade carried the day, largely because of concerns over national sovereignty. Most subsequent Canadian governments have been reluctant to explore the possibility of a Canada-U.S. free trade arrangement.

During the 1920s and early 1930s, attention on the trade front turned to the Commonwealth. Through these years, and importantly in 1932, Canada evolved a system of geographically discriminatory trade policies characterized by Commonwealth preferences, although at first these preferences were not reciprocated. Not only was there no debate at this time on the issue of free trade with the United States, but the highest tariff in a three-tariff system applied to imports from the United States. Attempts to negotiate a free trade arrangement with the United States were perceived as detrimental to the interests of the Commonwealth and to Canada's participation in it.

The situation began to change in 1935 when a bilateral trade agreement was concluded with the United States. This was the first of several such agreements negotiated in the Roosevelt years between the United States and its major trading partners. These agreements, in turn, were to lay the groundwork for the evolution of the General Agreement on Tariffs and Trade (GATT) in the postwar years as the main instrument of a global and multilateral approach to trade policy making by all the major industrialized countries. Canada was an active participant in the GATT from the beginning and remains one today.

Canadian Access to U.S. Markets

In the last few years, improving our access to export markets beyond that already achieved over the postwar period has become a key objective of Canadian trade policy. Advocates of Canada-U.S. free trade

argue that a more active and aggressive bilateral stance on our part is necessary in order to develop more fully our markets in the United States, and that such an approach is complementary to our participation in multilateral GATT negotiations, not competitive with it. They suggest that it is no longer sufficient to assume continuance of the good neighbour policies espoused by the United States in the Roosevelt years or to rely on multilateral trade negotiations under the GATT as the main vehicle through which to achieve a trading environment which is beneficial to Canada. Active bilateral negotiations with our largest trading partner are seen as a necessary complement to multilateral efforts.

The size of our trade with the United States is the factor underlying the call for a further careful examination of the option of bilateral free trade with the United States. Over 75 percent of our exports currently go to the United States and this fraction of our trade has been growing steadily during the postwar years. The primary objectives of bilateral free trade are greater access for our exports to vital markets abroad and greater security to ensure that access will not be withdrawn.

Those opposing bilateral negotiations argue instead that the existing multilateral system needs as much support as possible, especially from countries such as Canada which are heavily dependent upon an open world trading system governed by rules supported by the discipline of multilateral agreements. Some also argue that Canadian trade policies should be directed toward reducing our dependence on U.S. markets and that a bilateral arrangement will increase that dependence to unacceptable levels. Some but not all opponents of Canada-U.S. free trade favour a Canadian trade policy of increased protection as a means of lessening our dependence on U.S. markets.

There have been many studies of these issues. Appendix B summarizes those studies which focus on the long-run gains we might achieve from increased access to the U.S. market for Canadian goods. All report gains to Canada, and in some cases these gains are quite substantial. It should, however, be borne in mind that all empirical analyses of this type are highly uncertain because simplifying assumptions must be made and the precise data are frequently unavailable. Not surprisingly, there is wide variation in the estimated gains. Other qualifications regarding potential gains are noted by Wilkinson in his paper in this volume. However, as the summary in Appendix B indicates, the disagreements are quantitative and not qualitative; long-run benefits are positive and in some studies significantly so.

A recent study by Harris and Cox (1983), which has attracted substantial attention, is summarized in Richard Harris's paper in this volume. Harris and Cox's estimates of the gains from bilateral free trade consider the effects of eliminating tariffs on most products (chiefly manufactured goods) and in some cases eliminating a few non-tariff measures. Their conclusion is that the gains to Canada from multilateral free trade would

occur under bilateral free trade and are potentially large, perhaps in the region of 10 percent of GNP. In subsequent work (1984), they estimate the gains from bilateral free trade to exceed those from multilateral free trade.

The papers in this volume by Ronald Wonnacott, Richard Harris and James Markusen spell out the ways in which gains would be realized from increased access to the U.S. market combined with reduced Canadian trade barriers. It is widely agreed by economists that the gains to Canada from a bilateral free trade arrangement with the United States would be much greater than the gains from unilateral free trade. In the presence of trade barriers in our largest export market, the price received by Canadian suppliers is the foreign price net of the costs associated with foreign trade barriers. These are borne by Canadian suppliers and ultimately by Canadian factors of production that are not internationally mobile. The removal of foreign barriers thus improves the terms upon which Canadian goods are traded abroad.

A Canada-U.S. free trade arrangement also expands our potential for exploiting economies of scale in Canadian industry through enhanced access to a market more than ten times the size of our own. Canadian firms would be able to specialize more in particular product lines and to lower per-unit costs not only of those goods we export but also of those we produce for ourselves (see Figure I-A3 in Appendix A). The empirical work reported by James Baldwin and Paul Gorecki in this volume supports the case for these effects as likely outcomes of further trade liberalization. The largest part of the gains estimated in the empirical work of Harris and Cox and the Wonnacotts (see Appendix B) stems from these scale economy effects.

In addition to the direct gains from removal of barriers abroad and the scale economy effects, there can also be a beneficial pro-competitive effect in Canada from a bilateral free trade arrangement. In sectors with non-competitive elements in Canadian industry, the removal of Canadian trade barriers would bring about greater efficiency in response to increased competitive pressures from foreign producers in the Canadian market, and improved market access abroad would allow these gains to be more fully exploited.

Security of Access to U.S. Markets

Advocates of a Canada-U.S. free trade agreement also note the benefit which would result from the increased security of access to the U.S. market. Among the major economies of the developed world, only Canada and Australia have neither a large internal market, like the United States or Japan, nor access to a market of over 100 million people through a bilateral or other free trade arrangement, like countries within the European Community. Achieving improved security of access to the

U.S. market through a bilateral agreement is as important as improving the quality of existing access.

Whether our present access is ever actually withdrawn or not, the mere possibility of lessened access itself imposes costs on Canadians. The chance that our access may be impaired as a result of the application of safeguard measures or countervailing duties in the U.S. can substantially restrict the ability of firms in Canada to take advantage of increased trading opportunities. (A safeguard action involves the temporary imposition of restrictions on those imports which can be shown to be seriously injuring domestic producers. Countervailing duties may be imposed if it can be established that the imports in question have benefitted from a subsidy that provides them with a price advantage causing or threatening injury to domestic producers.) Only if access is secure will firms be willing to make the required long-term investments needed to realize the benefits which accompany access to a larger market.

The studies summarized in Appendix B do not contain estimates of the benefits of more secure access, nor have studies been made of the potential costs of decreased access on a product-by-product or industry-by-industry basis. However, two examples of the risks of major industrial adjustments are the lumber industry, where a countervail case in the United States nearly succeeded, and the steel industry, where global U.S. quotas were nearly introduced. The costs that would have been involved in these cases suggest that the potential dangers to Canada from impairment of access to U.S. markets are significant.

U.S. protective measures affecting Canada, such as countervailing duties or safeguard actions, can be triggered by events which do not directly involve us. In the past few years, the United States has used safeguard measures to protect its domestic producers from rapid penetration of its markets by imports which are often from the developing world. The possible imposition of such trade restrictions has serious implications for Canadian suppliers, whether or not they are the source of the problem.

Where Canada is not the major supplier and not the source of the problem, some believe that it should be possible to come to an arrangement with the United States whereby we are exempted from these measures. By directly negotiating these issues with the Americans, they believe that we will be able to go further and move faster toward improving both the degree and security of our access to U.S. markets.

Sovereignty and Constraints on Domestic Policies

There has long been concern that increasing economic integration with the United States leads to erosion of Canada's cultural and political sovereignty, and that a bilateral free trade arrangement would exacer-

bate this problem. This was a factor in the election of 1911 and in the decision by Mackenzie King in 1948 not to go ahead with a free trade agreement with the United States, the basis of which had already been negotiated.

The paper by Mel Watkins in this volume explores some of the issues. A major concern expressed by Watkins is that increased dependence upon the United States would subject Canadian policy makers to pressures from the United States with respect to policies that should rightfully be considered purely domestic. Regional development policies are frequently raised as examples. A countervailing duty case in the 1970s involving regional subsidies to locate a Michelin tire plant in Atlantic Canada illustrates how our dependence on access to U.S. markets can limit our manoeuvrability on other policy fronts.

Given our current high degree of economic integration with the United States, the issue is whether we would have more or less freedom to pursue such measures under a free trade arrangement. The Michelin case made it clear that Canadian regional development policy already cannot be implemented without regard to its effects on trade policies abroad. However, if a bilateral free trade agreement included provisions defining the conditions under which such policies can be pursued without invoking countervailing duties and establishing a dispute resolution procedure, it could widen the range of regional policies open to Canadian governments.

A further issue is whether Canadian freedom of action with respect to both foreign and other domestic economic policies would be severely constrained under a free trade arrangement. These concerns have proved important in the past, although how well-founded they are remains a subject of debate. These issues are taken up further in the research materials relating to Canada-U.S. free trade appearing under the Institutions and Legal branches of the Commission's research program.

A final concern is that once entered into, a bilateral free trade arrangement could set in motion a dynamic process in which Canada is slowly forced to make a series of concessions to the Americans because termination of the arrangement would involve serious adjustment costs. The fear is that these concessions could be linked to resource questions.

Costs of Adjustment

A Canada-U.S. free trade arrangement would also necessitate reorganization of production in Canada. These economy-wide adjustments are unlike those potentially involved were the United States to use countervailing duties or safeguard measures to restrict our market access. They would involve movement of factors of production both within and between industries and regions, and would inevitably produce some

degree of short-run dislocation. Some of those opposed to bilateral free trade argue that these adjustment costs are significant relative to any long-term benefits such an arrangement may yield us.

Unfortunately, hard evidence on both the dimensions and the costs of the adjustments is limited. Appendix C reviews some of the findings from previous research studies relevant to this issue. These studies of Canada and other countries suggest that the ratio of long-term gains from trade liberalization may be in the region of 25:1 to 80:1. While these studies do not apply specifically to a Canada-U.S. free trade arrangement, they suggest that the long-term benefits are large enough to offset even very substantial adjustment costs.

This is not to imply that adjustment costs are unimportant in absolute terms or can be ignored. The papers presented at the Commission's symposium on adjustment stressed that the short-run adjustment costs of any free trade arrangement with the United States must be recognized in any decision on this issue, and appropriate adjustment policies must be carefully considered. Most of the material from this symposium appears in *Domestic Policies and the International Economic Environment*, Volume 12 of the Commission's research series.

Both theory and existing empirical work also provide some indication of where these adjustments will take place. In a bilateral free trade arrangement, our manufacturing industries, which would face a contractionary effect from the elimination of our own protection, would likely face a stimulative effect as a result of the elimination of foreign trade barriers. Studies which have been done on this issue, such as the Harris paper in this volume, suggest that there could well be a net increase in production by our manufacturing industries since the stimulative effect of increased opportunities abroad should more than offset the contractionary effect of increased competition from foreign goods in the Canadian market.

Within the manufacturing sector, some of the studies indicate that capital-intensive industries, such as resource processing industries, will likely expand. Labour-intensive industries would tend to contract, although the competitive pressures forcing them to do so would not be so great as they would be under multilateral free trade, since these industries are also heavily protected in the United States. The study by Harris suggests that over the long term as much as 6 percent of the Canadian labour force might be eventually re-allocated between industries as a result of a wide ranging Canada-U.S. free trade arrangement.

Impacts on Investment Flows

A further concern is that a bilateral free trade arrangement with the United States could result in a significant amount of foreign investment leaving Canada. Indeed, one of the reasons often cited for using a

protective tariff is to encourage the establishment of branch plants of foreign firms in Canada. The fear is that these will leave if protection is lowered.

These issues are discussed in the paper by David Burgess. Undoubtedly, were Canada to remove its protection unilaterally, some of the investment which had been encouraged to come into Canada behind the protective barrier would leave. However, as Figure 1-A5 in Appendix A indicates, the net effect in the case of a bilateral free trade arrangement remains unclear. While removal of the incentive of protective tariffs would induce some investment to depart, the removal of trade barriers to U.S. markets would induce other firms to invest in Canada. All firms would consider the degree of security of access which any trade agreement would offer them before deciding to expand production in Canada.

The size of the Canadian market relative to the minimum efficient scale of plant operation and the extent of economies of scale are other important considerations. Canada could become a more attractive location for investment seeking to serve a North American market, but on balance it is difficult to say definitively whether foreign investment in Canada would increase or decrease under a bilateral free trade arrangement with the United States.

Exchange Rate Effects

None of the studies summarized in the appendices estimates the effects of a bilateral free trade arrangement with the United States on the exchange rate. These issues are, however, taken up at a more general level in a paper by David Longworth in *Domestic Policies and the International Economic Environment*. His study focusses on whether more instability in exchange rates might result.

Most economists agree that in the long run there is no reason to believe that the exchange rate would be made more unstable by Canada-U.S. free trade. A free trade arrangement would simply raise or lower the exchange rate according to the differences generated by the relevant macroeconomic variables. In the short run, however, would an additional degree of instability accompany a change in trade policies? Some economists believe that there would be a smooth transition of the exchange rate to its new value, while others maintain that because the required re-allocations in the economy may occur at an uneven pace, the exchange rate could be especially volatile.

No matter which of these positions is correct, the experience of recent decades suggests that many forms of external disturbance will affect the economy in the years ahead, and each will have the potential to produce short-run instability in foreign exchange markets. Changes in exchange rates due to a free trade arrangement may well be only a relatively minor factor.

Regional Issues

Historically, there have always been important regional dimensions to Canadian trade policy which must enter into any assessment of a Canada-U.S. free trade arrangement. Regional considerations and Canadian trade policies were discussed at a research symposium. A symposium summary by Colleen Hamilton and John Whalley and other papers on regional issues appear in this volume.

The paper by James Melvin presented at the symposium provides an analysis of the regional consequences of Canadian tariffs and examines the effects for Canadian industries with increasing returns to scale. In addition to the usual economic losses to consumers and producers (shown in Figure I-A1 in Appendix A), Melvin emphasizes that a further effect of protection in Canada has been to stimulate interprovincial trade at the expense of international trade. Interprovincial trade may involve higher transportation costs than international trade and Melvin regards these higher and socially wasteful transportation costs as one of the main effects of our protection. He suggests that costs would be greatly reduced in a Canada-U.S. free trade arrangement, adding weight to the argument that all regions may gain from bilateral free trade.

The paper by Ronald Shearer surveys the literature on the regional effects of protection in Canada and discusses the chances of reaching a national consensus on bilateral free trade between the different levels of government. In Shearer's view, our trade policies in Canada over the years have been a major source of regional grievance. The tariff has been viewed as a vehicle through which regions producing manufactured goods benefit from federal trade restrictions at the expense of the other regions. Behind the tariff wall, producers of protected manufactured products receive major benefits because they can sell at higher prices than those prevailing in world markets. This perception explains why central Canada has traditionally opposed the idea of free trade with the United States, while other regions have been more supportive. Papers by both Shearer and John Earl note that this support still exists.

Earl also emphasizes that, from the point of view of Atlantic Canada, a free trade policy with the United States may yield some long-run benefits but also involves some complications. Industries in this region of the country have received substantial subsidies from the federal government. A free trade agreement could limit the extent to which regional development policies could be used without triggering countervailing duties. He suggests that such an agreement could have a significant impact on the region.

The "traditional view" of the regional effects of protection has frequently been questioned by economists. If factors of production are mobile between provinces in Canada, then it is no longer a simple matter to distinguish between regional gainers and losers as a result of changes

in trade policy. In his 1939 study for the Rowell-Sirois Commission, Mackintosh argued that protection probably lowers real income per capita in all regions, but that the only significant regional effects concern factor rewards accruing to immobile and specialized resources. The concept of regional “gains” or “losses” as a long-run result of trade policies may therefore not be that useful.

Further challenges to traditional perceptions have emerged in more recent academic writings on this topic. In the Harris model, for instance, both manufacturing and resource industries in Canada expand under free trade. Gains occur in all regions, with the greatest increases in real wages appearing in central Canada. Therefore some economists believe that no regional disagreements need exist on the question of the desirability of a Canada-U.S. free trade arrangement.

Interaction with the GATT and the Multilateral Trading System

Any decision about whether to supplement our existing multilateral approach to trade policy with a further bilateral approach depends upon the state of the global trading system and the way it would be affected by a Canada-U.S. arrangement. It may be argued that middle-sized countries like Canada, which have a considerable stake in the health of the system, should not choose this time to direct their energies toward bilateral negotiations. Current problems with the multilateral trading system suggest the need for more extensive multilateral rules and discipline. This entails a renewed commitment and a more activist role on the part of countries like Canada. Furthermore, a bilateral arrangement could have negative impacts on the multilateral trading system. It could be viewed as a move to further fracture the system along North-South lines. As well, it may simply create a further regional grouping in a system which some argue is already fragmenting into regional groupings.

It is, however, also possible to argue that a bilateral arrangement could prove beneficial to the multilateral system. The formation of the European Community in 1958 was one of the major factors leading to the acceleration of the multilateral trade negotiations under the Dillon Round in the GATT. The need for the larger powers to deal with the newly emerging trade arrangement in Europe propelled multilateral negotiations forward. A similar event could occur today were we to negotiate bilaterally with the United States. Bilateral agreements on various issues could also prove useful as models for subsequent multilateral agreements. These possibilities could make bilateral negotiations with us attractive to the United States.

If there is a future negotiating round under the GATT, as many believe, it is quite possible that pre-negotiation meetings may continue for some

time and the round itself could be protracted. Multilateral negotiations would take up some issues of great importance to Canada but would also deal with others that are relatively unimportant to us and will also involve a large number of countries whose trade policies are of less interest to us than those of the United States. Multilateral negotiations, while clearly helpful to Canada, may therefore provide a slower and less direct route to achieve our primary objective of improved and secure access to our largest market.

A major concern for Canada is the uncertainty about the direction in which U.S. trade policy is headed, as discussed in the paper by Raymond Ahearn and Alfred Reifman. Over the last two years there has been discussion in the United States about the possible use of reciprocal trade measures to force its major trading partners to open their markets to U.S. suppliers. In their extreme form, such proposals would require the U.S. government to impose trade barriers against other countries at levels equal to the trade barriers which U.S. suppliers face on a market-by-market and product-by-product basis.

While at present such legislation in the United States still seems a remote possibility, there is no doubt that the traditional U.S. good neighbour policy has been modified and now accepts the aggressive use of trade policy instruments to gain increased access to foreign markets. The threats posed to Canada by the use of these measures suggest the value of negotiating improved security of access to reduce the threat that Canada, as an innocent party in a wider trade conflict, could lose part of its access to its largest market.

There is clearly a delicate judgment call to be made on these issues. Canadians stand to benefit from increased market access abroad and increased security of that access. The crucial issue is whether improved access is best secured through bilateral or multilateral negotiations or some combination of the two.

Other Bilateral Options

Are there other bilateral trade arrangements that Canada could or should seek, beyond one with the United States? There have been frequent discussions over the years of the merits of seeking to diversify our foreign trade away from heavy dependence on the U.S. market. A bilateral trade agreement with one or more of our other trading partners, such as Japan, is sometimes suggested as a way of achieving this.

The paper by Ronald Wonnacott in *Canada and the Multilateral Trading System*, Volume 10 of the Commission's research series, considers the pros and cons of a Canada-Japan free trade area. He concludes that while there could be benefits to Canada, the gains would probably be fairly small. The most telling argument against such an arrangement is the level of disturbance it would cause in our trade arrangements with

the United States. A negative U.S. reaction would be likely, as the United States would lose export sales in Canada due to trade diversion toward Japanese sources. Wonnacott therefore sees bilateral arrangements with countries other than the United States as a useful complement to a Canada-U.S. agreement but not as a substitute for it.

Implementing Bilateral Free Trade

In addition to laying out the arguments for and against bilateral free trade with the United States, a significant part of the Commission's research effort in this area has been devoted to examining how a bilateral free trade agreement might be implemented.

Prospects for Sectoral Free Trade

Current discussions with the United States on sectoral free trade began after the release of *Canadian Trade Policy for the 1980s* by the Department of External Affairs in 1983. This document suggested that consideration be given to Canada-U.S. free trade in textiles, petrochemicals, urban transit equipment, and agricultural machinery. The issues raised by a sectoral approach to free trade with the United States were taken up in a research symposium, summarized in a paper in this volume by Colleen Hamilton and John Whalley.

The sectoral approach to free trade with the United States has several advantages. It restricts adjustment problems to certain sectors. Also, since a substantial amount of our trade with the United States will be essentially duty free by the end of the Tokyo Round implementation period, negotiations on a sectoral basis can focus on those remaining areas with high tariffs or non-tariff measures of particular importance to Canada.

However, a sectoral arrangement also has drawbacks. It would be difficult to deal with the crucial issues of contingent protection through such an agreement, since it covers only certain sectors. Also, sectoral free trade would be counter to the spirit and the letter of the GATT and would fail to cover substantially all the trade between the two countries, as Article XXIV of the GATT requires a free trade arrangement. Therefore, a GATT waiver would almost certainly be required by the other GATT contracting parties, and at present they are unlikely to grant it.

Further disadvantages include the incentives for lobbying for exemptions by various groups once such a possibility is allowed, as well as the risk of increased distortions in sectors such as textiles, where producers might demand lower quotas on imports from third countries if imports from the partner country increase.

In contrast, a broader free trade area has the advantage of removing many of the customs procedures between the two countries, helping to

eliminate customs-related non-tariff measures involving administration and valuation, and allowing issues of contingent protection to be negotiated. Many commentators in Canada believe that a limited sectoral free trade arrangement with the Americans will only go a small way toward meeting our needs, and call for a broader and more comprehensive free trade arrangement.

Negotiating Bilateral Free Trade

The central feature of a bilateral free trade arrangement with the United States would be the removal or substantial reduction of the trade barriers which we face in U.S. markets, and a corresponding relaxation in the barriers which we impose against imports from the United States. The trade barriers at issue go well beyond the tariffs which have traditionally been the focal point of debates on Canada-U.S. free trade.

A series of issues arise in the area of non-tariff measures. As documented in the papers by Peter Morici and Andrew Moroz, these are barriers such as government procurement policies which in the United States take the form of restrictions on the purchasing policies of state and local governments through the U.S. Surface Transportation Assistance Act and wider dimensions of the "buy American" policies.

The list of the non-tariff measures to be included would have to be carefully worked out. At this stage, the key non-tariff measures we would want included are probably those which significantly restrict our current access to the American market. The list, however, will no doubt be expanded prior to any actual negotiation and Canadians will have to carefully consider what they would be willing to add to the list.

Canadians would have to decide whether they are prepared to include issues relating to agricultural protection. It may be that common interests are of more importance to the two countries than bilateral trade barriers. There are nevertheless bilateral issues of some significance, as explained in the paper by Thorald Warley. Of primary importance are American complaints about subsidies to Canadian pork and beef producers under various price stabilization schemes and credit assistance. Countervailing duties by the United States in these areas could have serious consequences for Canadian producers.

Differences also exist regarding agricultural policies toward third markets. For example, the United States sees the Canadian Wheat Board as a state trading agency, capable of securing sales by selling below market prices. Objections may also be raised to subsidies now paid to grain producers under the Western Grain Transportation Act of 1983. While there are products in both countries in which high tariffs or restrictive quotas exist, Warley notes that these are not necessarily a source of dispute. The restrictions may simply be part of separate but parallel systems in the two countries.

Agricultural products are not the only items that might be excluded from an agreement. There are complex regulatory issues in Canadian banking, transportation, and other service industries that may make it desirable to restrict negotiation to bilateral free trade of goods. The Americans would seem likely to argue the other way and push for inclusion of services. Our policies toward the energy sector may also be raised by the Americans, and we would have to decide whether bilateral free trade should apply to energy products. Similar issues may arise with other resource products, including water.

A further question is whether a bilateral agreement would take the form of a free trade area or a customs union. Ronald Wonnacott discusses this issue in his paper in this volume. It is commonly assumed that a free trade area would be preferable for Canada. It would require no compromises to be made over Canada's trade policies with respect to the rest of the world, whereas a customs union involving common external barriers against the rest of the world would require harmonization of Canadian and U.S. policies toward third countries. While Canada is currently more protectionist, the differences between the two are not great but the differences could become greater, especially when one considers the possible directions U.S. trade policy could take in the future.

A further issue that would inevitably arise in negotiations between the Canadian and U.S. governments is the treatment of Canadian provinces and U.S. states. Agreements between federal governments cannot bind other levels of government. Current and future policies of provincial or state governments could be important bilateral irritants. Procurement policies, agricultural policies, subsidies, and policies of provincial liquor control boards are all examples. This problem is not new to trade negotiations. The Tokyo Round agreement on government procurement did not cover provincial and municipal governments. If cooperation from these levels of government is to be achieved, extensive consultation will have to be carried on both before and during a negotiation. This was done with provincial governments rather successfully during the Tokyo Round, as summarized in the staff paper by Hamilton and Whalley on regional dimensions of Canadian trade policies. As Shearer's paper makes clear, provincial interests on these issues are not clear-cut, even for provinces that are large producers of resource products. Thus, although all regions of Canada may benefit to some extent from a bilateral free trade agreement, Shearer warns that it may not be easy to establish a national consensus on how to proceed.

Another issue that could well arise in a bilateral negotiation is the question of guarantees covering levels of production in Canada for previously-protected industries. In the negotiations on the Auto Pact in 1965, Canada secured guarantees on levels of Canadian production after removal of bilateral trade barriers. These guarantees may well have only

been possible in the special circumstances of the Auto Pact itself — an agreement between governments and a small number of firms. While a Canadian government might wish to include such guarantees in an agreement, several questions will require careful consideration. Are such guarantees feasible? What sort of guarantees would be desirable, given that one objective of a free trade agreement is to allow Canadian manufacturing to rationalize and specialize? Would the complications that guarantees could add to the negotiations endanger the prospects for a successful outcome?

Further issues that would arise in negotiations would concern the form of the agreement. In an open-ended arrangement, other countries such as Mexico would be free to join on similar terms to those negotiated bilaterally between Canada and the U.S. Under a closed-ended arrangement, other countries would not be free to join. Canadians would have to carefully consider the costs and benefits involved in choosing between these two options, although our interests in an open multilateral trading system might suggest a preference for an open-ended agreement.

Another issue is whether we should seek to conclude an agreement through a treaty or through some other device such as an executive order. If a bilateral free trade agreement were later abrogated in whole or in part by the United States, the adjustment costs would be higher for Canada than for the United States. It would therefore be in Canada's interest to reduce the likelihood of this as much as possible. A treaty is the form of agreement that many observers feel would be most difficult to alter later. It could be abrogated but this would require a more deliberate action by the United States, not a likely prospect given the widespread U.S. interests in Canada. The asymmetric costs of abrogation have also prompted suggestions that negotiations explore methods by which the abrogating country could be liable for compensation.

A further negotiating issue which would arise is the timing of reductions in tariffs and non-tariff measures. Would these be phased in over a period of years? If so, would the rate of introduction be different for the United States than for Canada? Some have suggested, for example, that Canadian protection be phased out more slowly, to ease the adjustment costs borne by Canada during the transition. Others have argued that a swift elimination of barriers on both sides of the border, at some date announced a few years in advance, would be the best way to capture the gains from freer trade.

U.S. Response to a Canadian Initiative

While almost all of our research has dealt with Canadian issues, the interests of the United States are clearly of great importance to the issue of Canada-U.S. bilateral free trade. Unless such a step is in the interests of the United States, negotiations could not proceed.

The consequences of bilateral free trade have not been studied in the United States to nearly the same degree as in Canada, and consequently the United States has still to fully develop its position on the issue. The symposium paper by Diebold provides one American view.

In William Diebold's opinion, a wide range of bilateral issues could be drawn into negotiations: for example, domestic policy aspects of non-tariff measures, trade-related investment issues, and industrial policies and industrial strategies generally. The United States also has wider global interests to consider. The consequences for the multilateral trading system of proceeding with alternative forms of Canada-U.S. free trade would also be of interest to the Americans, given the stake they have in the maintenance of the health of the world trading system. The arguments concerning these consequences, reviewed earlier, do not point decisively in one direction or the other. In the United States, as well as in Canada, a final judgment would have to be made by political authorities.

The perception in the United States is that previous initiatives on Canada-U.S. free trade have been taken south of the border, only to be turned back once the debate was engaged in Canada. This has prompted some to suggest that the United States might now be receptive to a concrete proposal from Canada. This factor should be considered alongside the new willingness of the United States to deal bilaterally with "like-minded powers" on trade policy matters, and the strategic advantage to be gained from this in U.S. efforts to bring Europe and Japan to the multilateral negotiating table.

Both Canadians and Americans will have to consider carefully the many issues raised by the possibility of freer trade between Canada and the United States. We hope that the research material in this volume will help in the debate which we anticipate will follow the publication of the Commission's report.

Appendix A

The Diagrammatics of the Welfare Effects of Canada-U.S. Free Trade

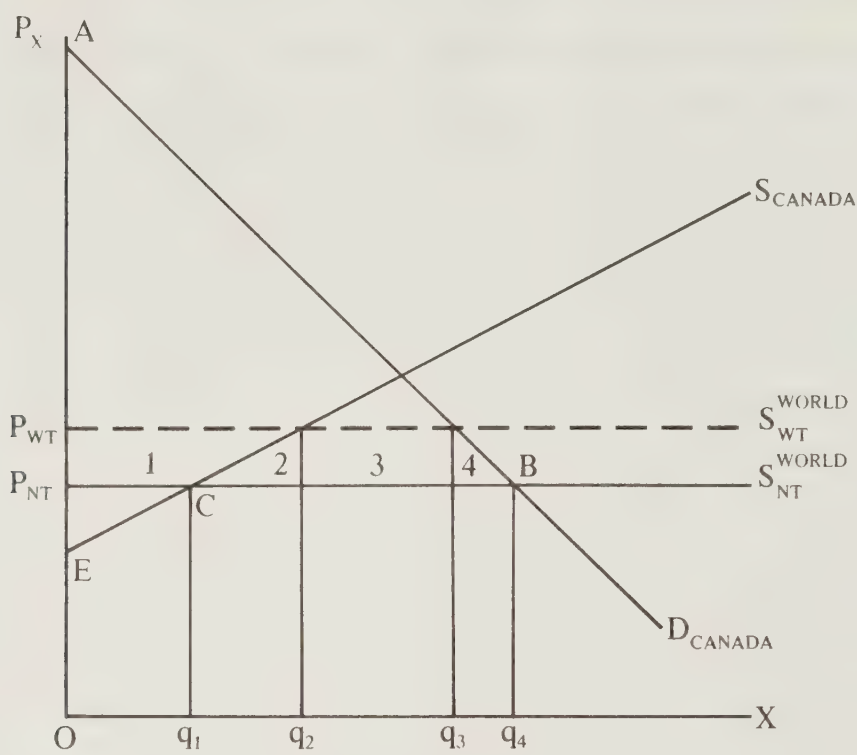
The arguments surrounding Canada-U.S. free trade are frequently made by economists using diagrams. Since these diagrams may serve to clarify the issues in the debate on Canada-U.S. free trade, some are provided in this appendix to illustrate the main points at issue. Partial equilibrium diagrams are used here because they are widely used and relatively easy to follow. The theoretical problems associated with partial equilibrium models, particularly in the interpretation of the measures of the welfare effects of trade policy changes, will be familiar to readers with expertise in applied welfare analysis.

Figure 1-A1 contains a demand-supply diagram which can be used to illustrate the long-run costs imposed on Canadians by our tariffs. We consider a single good, X , of which Canada is a net importer. Without a tariff, Canadians face a perfectly elastic supply function S_{NT}^{world} for the good at the given world price P_{NT} . The quantity consumed by Canadians is q_4 , the quantity produced by Canadians is q_1 , and imports are $q_4 - q_1$. In the presence of a tariff on good X , the world supply function faced by Canadians shifts up by the amount of the tariff to S_{WT}^{world} . The quantity consumed by Canadians falls to q_3 , that produced by Canadians increases to q_2 , and imports fall to $q_3 - q_2$. The protective effect of the tariff is therefore apparent in the form of increased production by Canadian suppliers, reduced imports, and reduced consumption.

The long-run cost of the tariff to Canadians follows by recognizing that benefits to Canadians from consuming good X are given by the area under the demand curve, since the demand curve indicates the price consumers are willing to pay for each additional unit of the commodity. The national costs of providing good X are given by the area under the lowest supply curve for each unit supplied, since the supply curves denote the resource cost of either producing or importing additional units of the commodity. The maximum potential net national benefit from consuming good X (consumer benefits less national costs) is given by the area $ABCE$.

In the event that a tariff is imposed on good X , the loss in consumer benefits is given by the areas $1 + 2 + 3 + 4$. This amount is net of the saving in costs of providing the additional $q_4 - q_3$ units of X that would be consumed in the absence of the tariff. Area 1 , however, is also an area of net gain to Canadian producers, since this indicates the additional revenues due to the price rise they receive as a result of protection in domestic markets, net of extra production costs. From a national point of view, therefore, area 1 nets out as an area of both gain and loss, although the gainers and the losers involved are typically different agents

Figure 1-A1 Partial Equilibrium Analysis of the Impact of Tariffs in Canada



National welfare effect of a tariff on good X

- Area: 1 = consumer benefit loss, domestic producer gain
 — no national effect
- 2 = additional domestic production costs induced by the tariff — national loss
- 3 = consumer benefit loss, tariff revenue collections
 — no national effect
- 4 = consumer benefit loss — national loss

National welfare cost of the tariff: areas 2 + 4

in the economy. Equally, area 3 nets out from a national point of view, since it denotes both an area of consumer losses and also tariff revenues collected by the government. This leaves the areas 2 and 4 as areas of net national cost from the tariff.

Area 2 represents the loss from the tariff due to the misallocation of resources in production, a result of the tariff-induced additional domestic production, which is more expensive from a national point of view than importing from international suppliers. Area 4 represents the consumer benefit loss from the tariff, the effect of the tariff in restricting consumption by raising the price to consumers above prices prevailing on world markets.

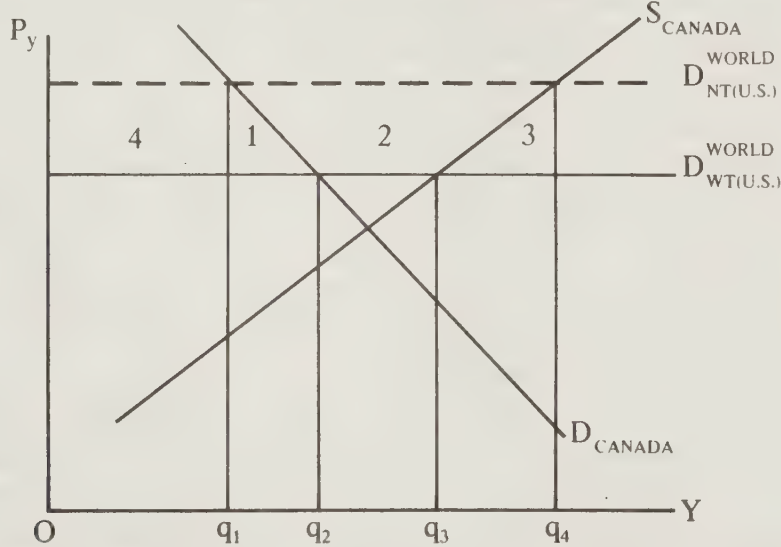
Figure 1-A2 contains a demand-supply diagram for a single good, Y, of which Canada is a net exporter. This diagram can be used to illustrate the gains to Canada of a reduction in tariffs (or other trade barriers) in U.S.

markets. The effect of a tariff reduction in U.S. markets is to raise the price received by Canadian suppliers, implied by the perfectly elastic demand functions which Canadians face in foreign markets. Canadians are assumed to be takers of prices in world markets, and a lowered U.S. tariff increases the net-of-tariff price received by Canadian suppliers on each unit sold abroad from P_{WT} to P_{NT} . The reduction in the U.S. tariff shifts the demand curve Canadian exporters face upward from $D_{WT(U.S.)}^{world}$ to $D_{NT(U.S.)}^{world}$.

Producers gain an amount equal to areas 1, 2 and 4 in Figure 1-A2 from the tariff reduction in the United States. Area 3 nets out from a national point of view, as it represents the increased marginal costs of the extra production $q_4 - q_3$. In calculating the national gain, areas 4 and 1 also net out, as they represent transfers from domestic consumers to producers. This leaves area 2 as the net national gain. Part of area 2 represents a transfer from the foreign country (where tariff revenue was previously collected) to domestic producers. This is the amount $(q_3 - q_2) \times (P_{NT} - P_{WT})$.

These diagrams therefore indicate that two triangular areas of gain accrue to Canadians from eliminating our own protection, while two

Figure 1-A2 Partial Equilibrium Analysis of the Impact on Canada of Lowered Tariffs in U.S. Markets



National welfare effects of a lowered tariff in the United States on good Y

- Area: 1 = loss in consumer benefits, domestic producer gain
—no national effect
- 2 = domestic producer gain—national gain
- 3 = incremental domestic production costs, domestic producer gain from higher prices
—no national effect
- 4 = loss in consumer benefits, domestic producer gain
—no national effect

Gain to Canada from the reduced tariff in the U.S.: area 2

triangular areas plus a rectangle (tariff collections abroad) accrue from lowering tariff protection in U.S. markets. A general presumption exists that the gains to Canada from lowered U.S. trade barriers are larger than the long-run benefits from reducing our own trade barriers. This is due to the revenue transfer effect. Because Canada is a small open economy, a reduction in tariffs abroad involves a transfer of revenues from the foreign treasury to Canadians. This effect does not operate with our own tariff. Because we are a taker of world prices, our own protection merely causes us losses on both the production and consumption sides of the economy.

Figures 1-A1 and 1-A2 both exclude the role which can be played by economies of scale in Canadian manufacturing in generating gains for Canadians when trade barriers fall, especially when protection is lowered abroad. This is illustrated in Figure 1-A3.

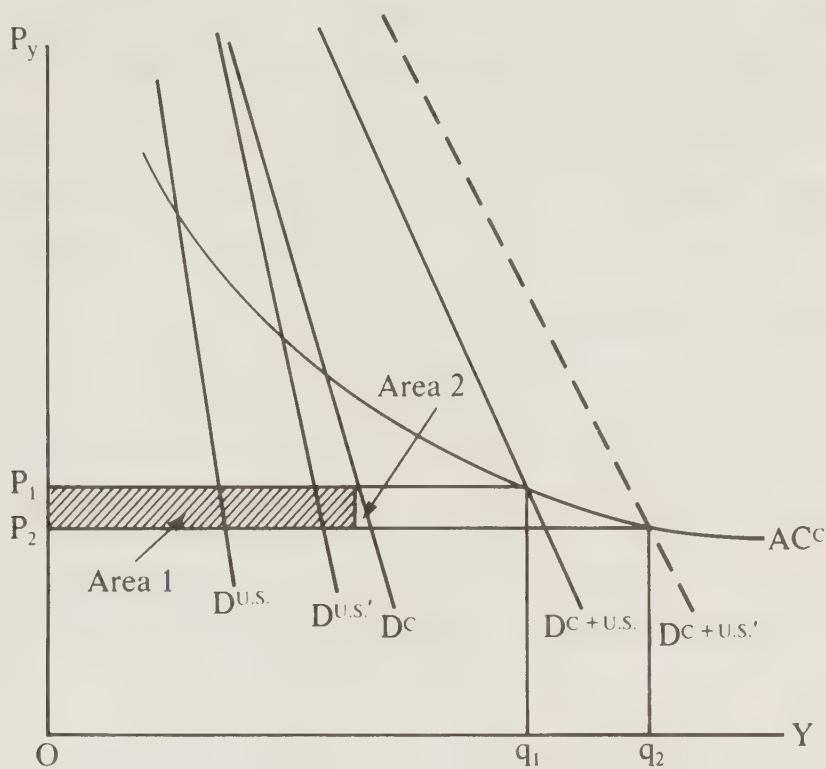
This diagram represents the market for the single product, good Y , which Canada exports to the United States. Unlike the cases examined in Figures 1-A1 and 1-A2, the assumption that Canada faces a perfectly elastic export demand function is replaced by the assumption that the demand curve Canadian suppliers face in U.S. markets, $D^{U.S.}$, is downward sloping. The domestic demand within Canada is given by the demand curve D^C and the total market demand curve by the horizontally summed demand curve $D^C + D^{U.S.}$.

Increasing returns to scale are represented by the downward sloping average cost curve for Canadian producers AC^c . It is assumed here that producers in Canada price at average cost, as shown in the diagram, even though the theory of market structure in the presence of increasing returns to scale suggests that their behaviour in practice may be different from this. With increasing returns to scale over the whole range of output levels, the tendency will be for a single monopoly supplier to emerge who will set a monopoly price by selecting an output level at which marginal revenue equals marginal cost, rather than to set price equal to average cost as is assumed here.

In the absence of any reduction in trade barriers in the United States, the U.S. demand curve for good Y supplied from Canada is $D^{U.S.}$, the total quantity supplied is q_1 , and the price obtained by Canadian suppliers is P_1 . A reduction in trade barriers in the United States shifts the export demand curve faced by Canadian suppliers from $D^{U.S.}$ to $D^{U.S.'}$ when plotted as a function of price received by Canadian suppliers. The total quantity supplied increases to q_2 , and the price charged by Canadian suppliers falls to P_2 .

The main benefit this creates for Canadians is lower prices on Canadian consumption, occurring because of the economies of scale. This is represented in Figure 1-A3 as area 1. In addition, a further consumer benefit gain, area 2 under the demand curve, also occurs. No producer effects need to be taken into account in this diagram in determining the

Figure 1-A3 Economies of Scale and the Benefits to Canada from Lowered U.S. Tariffs



National welfare effects of a lowered tariff in U.S. on good *Y*

- Area: 1* = consumer gain from lowered prices on domestic consumption—national gain
 - 2* = consumer benefit gain—national gain
- Gain to Canada from the reduced tariff in the United States:
 areas *1* + *2*

national welfare effects, since producers are always assumed to price in such a way as to just cover average costs.

Importantly, the gains to Canadians from reduced trade barriers in foreign markets accrue through more efficient production, gains from rationalization of industry in Canada, and cost savings on production consumed here. This is usually cited as the major component of the welfare gains for Canada from a Canada-U.S. free trade arrangement in those studies which emphasize the benefits from scale economies.

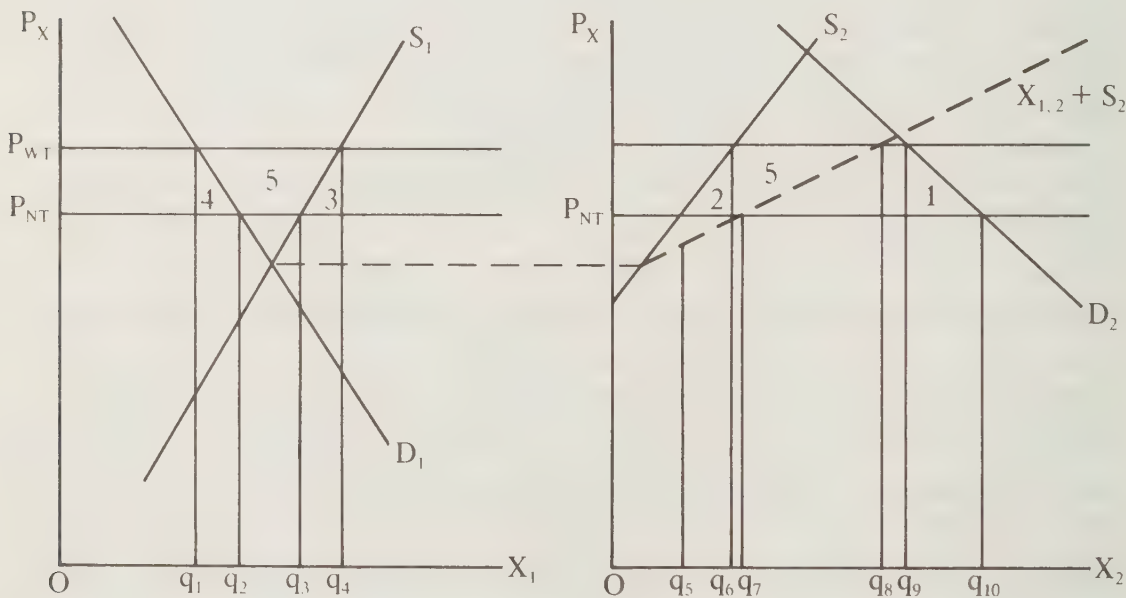
Figure 1-A4 shows the interregional effects of tariffs in Canada in the case where Canada as a whole is a net importer of the commodity in question but one region is an interregional (and international) net importer of the product while the other region is an interregional net exporter and factors of production are interregionally immobile. In the absence of the tariff, a price of P_{NT} prevails in both regions, and region *1* exports $q_3 - q_2$ of good *X* to region 2. Exports from region *1* to region 2 are shown as $X_{1,2}$ in the diagram. This corresponds to $q_7 - q_5$ in region 2's

demand-supply diagram, with the rest of region 2's imports, $q_{10} - q_7$, coming from abroad.

If a tariff is imposed, the price of the good rises to P_{WT} in both regions and interregional trade increases. Region 1 now exports $q_4 - q_1$ to region 2, corresponding to $q_8 - q_6$. Imports from the rest of the world fall to $q_9 - q_8$. The national welfare costs of protection in Canada, the areas of production and consumer loss under demand and supply curves, are the same as in Figure 1-A1, except that in Figure 1-A4 these effects are separately identified by region. Area 5 represents interregional transfers, denoting the gain to the interprovincially exporting region from protection under the Canadian tariff.

The paper by James Melvin in this volume emphasizes the additional welfare loss from protection as increased resources are used for transporting goods between regions while tariff revenue collected by the government declines. As Melvin notes, this occurs because the effect of the Canadian tariff is to cause interregional trade (with costly interregional transport costs) to substitute for international trade. If this occurs, the national welfare cost of the tariff will be larger than in Figure 1-A1, and the interregional transfer effect in Figure 1-A4 will fall. This

Figure 1-A4 Interregional Effects of the Canadian Tariff



National welfare cost of the tariff

- Area: 1 = consumer benefit loss in Region 2
- 2 = incremental production costs incurred in Region 2
- 3 = consumer benefit loss in Region 1
- 4 = incremental production costs incurred in Region 1

Interregional Transfer Effect

- Area: 5 = Gain to Region 1 from higher prices on interprovincial exports:

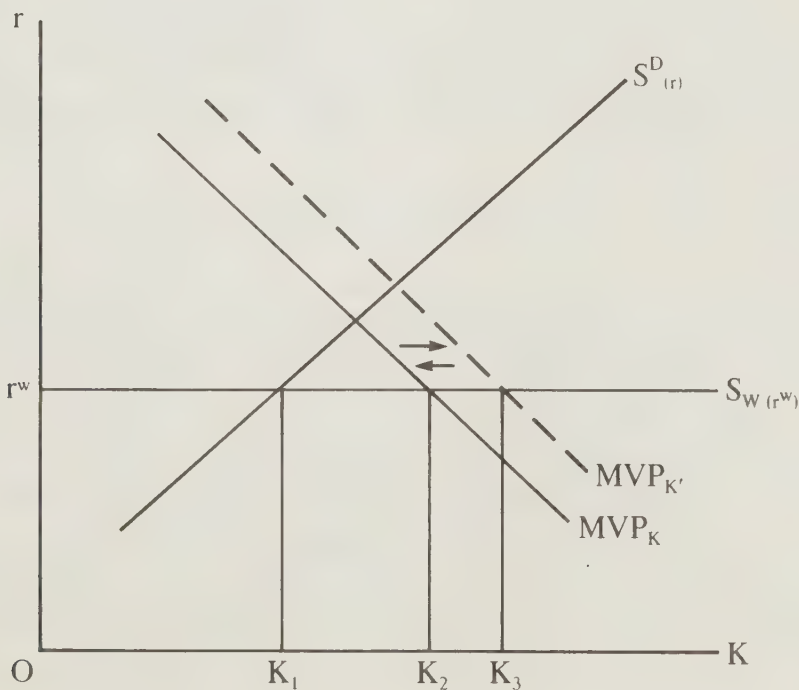
is because the region which is a net exporter will receive a price net of transport costs, not the world price gross of the tariff as in the no-transport cost case.

It is also important to note that Figure 1-A4 only represents the interprovincial effects of the Canadian tariff, not the interprovincial effects of U.S. trade barriers. Indeed, the presumption is that since both U.S. and Canadian tariffs are heaviest on manufactured products, Ontario and Quebec, being net exporters of manufactures interprovincially, are likely to be gainers from Canadian protection but to be most adversely affected by U.S. trade barriers.

Figure 1-A5 illustrates the effects of Canadian and U.S. tariffs on capital flows into Canada. The diagram depicts a supply-of-capital schedule from Canadian investors $S^D(r)$ which is increasing in the rate of return on capital r , and a demand-for-capital schedule MVP_K . The supply of capital from world capital markets is assumed to be perfectly elastic at the prevailing world rate of return r^w . At this rate, capital employed in Canada exceeds the domestic supply of capital and the amount of capital $K_2 - K_1$ is supplied from world markets, i.e., Canada is a capital importer.

The effects of Canadian and U.S. tariffs on the size of this capital inflow are opposite to each other in direction. An elimination of U.S. tariffs raises the net-of-U.S.-tariff price that Canadian suppliers receive and shifts the marginal value product of capital schedule to the right,

Figure 1-A5 Effects of Canadian and U.S. Tariffs on Capital Flows into Canada



i.e., to MVP_k' . This increases the size of the foreign capital inflow from $K_2 - K_1$ to $K_3 - K_1$.

However, elimination of protection in Canada lowers the product price received by Canadian suppliers and will shift the marginal value product of capital schedule in the opposite direction. Hence, the net effect under bilateral free trade (where protection is simultaneously eliminated in both countries) is unclear.

Appendix B

The Long-Run Gains to Canada from Trade Liberalization Involving Canada and the United States

A series of studies have attempted to estimate empirically the gains to the Canadian economy from various forms of trade liberalization between Canada and the United States over the last 30 years. In this appendix, we present their main features in summary form. Many of these studies have encountered difficulties both with data availability and limitations of modelling and estimation techniques available at the time the studies were undertaken. Researchers, therefore, have often had to discard some of the analytical approaches to assessing long-run benefits to Canada discussed in the previous appendix for more imperfect but empirically feasible approaches. Nonetheless, the insights these studies have provided have been extremely important to the debate on Canada-U.S. free trade.

Young

One of the earliest attempts to quantify the cost of the Canadian tariff was made by Young (1957) for the Royal Commission on Canada's Economic Prospects. He estimates the "cash cost" of the Canadian tariff by asking how much the federal government would have to pay if it decided to use subsidies instead of tariffs to encourage import-substituting production in Canada. It is also possible to think of this as the additional cost to purchasers in Canada of having to buy protected Canadian-made goods at prices higher than those prevailing in the world market.

Young's estimation procedure uses 1954 data on output and private expenditure in 13 different categories of goods. He compares Canadian prices (net of taxes) with prices of goods from foreign (generally U.S.) suppliers (net of the tariff but inclusive of transportation costs). The estimation is therefore equivalent to areas 1 and 2 in Figure 1-A1 of Appendix A.

This approach omits some of the costs of protection reviewed earlier in Appendix A. In estimating the cost of the Canadian tariff, for instance, it effectively assumes a perfectly inelastic demand curve for each good in Canada, eliminating the loss of consumers' surplus normally resulting from the tariff. This method also measures items which are not a net cost of the tariff but are actually transfers from producers to consumers.

Young estimates a "cash cost" of the tariff of \$0.6 to \$0.75 billion in 1954 Canadian dollars — about 3.5 to 4.5 percent of gross private expenditure net of indirect taxes. He concludes that the inclusion of other factors, such as the tariff on government expenditure, would raise the cost to about \$1 billion.

Subsequently, Shearer has argued that Young's procedure should only estimate the increased cost on the additional output induced by the tariff (Shearer, Young and Munro, 1971, p. 185). This is the actual amount that Canadian industries would have to be subsidized in order to increase output to the levels existing with protection, i.e., from q_1 to q_2 in Figure 1-A1 of Appendix A. The subsidy, applying only to additional output beyond q_1 , shifts the Canadian supply curve down so that P_{NT} , q_2 is supplied by Canadian producers. However, this approach would still omit area 4 (a further cost of the tariff) and still include part of area 1 (not a net cost of the tariff).

Wonnacott and Wonnacott

Wonnacott and Wonnacott (1967) was the first major study of the possible effects of bilateral rather than unilateral free trade between Canada and the United States.

After a detailed study of locational and other cost considerations, the authors conclude that Canadian industry would face only minor non-wage cost disadvantages under bilateral free trade. Canadian wages could therefore rise to a level not much below those in the neighbouring parts of the United States. This would be possible because removal of trade barriers would be expected to lead to increased productivity due to the existence of economies of scale in manufacturing. The Wonnacotts conclude that the gap in productivity performance between Canadian and U.S. manufacturing would narrow and perhaps be eliminated under bilateral free trade.

Using 1958 data, the authors find that after adjusting for differences in the structure of employment between the two countries, Canadian

wages were about 30 percent lower than U.S. wages. They assume that upward pressures on wages would close this gap in the long run after the formation of a free trade area. They also assume that the exchange rate would rise to parity with the U.S. dollar — an 8 percent rise given their data. The cost to Canada of the Canadian and U.S. tariffs in the form of lower Canadian wages is calculated as:

$$(30 + 130 [.08]).15 = 6.06\% \text{ of GNP}$$

The 30 figure is the percentage increase in wages which would follow Canada-U.S. free trade. The 130 figure is the level of wages after the 30 percent increase. The .08 factor adjusts the wage level for the exchange rate appreciation, and .15 denotes the share of manufacturing wages and salaries in GNP.

In accounting for the costs to consumers of higher prices under protection in Canada, the Wonnacotts adopt Young's estimate, which they consider to be about 4 percent of Canadian GNP. The authors also derive a complex formula to estimate the gains to Canadian consumers from increased consumption of previously-protected manufactured goods, due to both lower prices and higher incomes. This corresponds roughly to the sum across different goods of the consumer surplus triangles (area 4 in Figure 1-A1 of Appendix A). Assuming income and price elasticities of unity for all manufactured goods, they calculate a gain of about .4 percent of Canadian GNP from this source.

Adding together these costs to Canada of Canadian and U.S. trade barriers yields a total of a little more than 10 percent of Canadian GNP. Of this, they attribute about 4 percent to the effects of the Canadian tariff, and the remainder to the U.S. tariff.

The authors emphasize that the gains would not be quickly realized. This is especially true for gains from higher wages. They therefore qualify their estimate of the long-term benefits from free trade in manufactured goods to 7 to 10.5 percent of Canadian GNP. The longer the time horizon considered, the higher the expected gains would be.

Shearer, Young and Munro

Following the work by the Wonnacotts, the study by Shearer, Young and Munro (1971) is one of a number of Canadian studies that examine the effects of Canada-U.S. free trade on one or more regions in Canada. This study estimates the effects on British Columbia of the removal of tariffs among the North Atlantic countries (Canada, the United States, the United Kingdom and the European Community). The effects of long-run interregional factor mobility within Canada are not incorporated.

The authors evaluate four components of the regional gains. (a) An interregional transfer effect is estimated by the imports of consumer goods from the rest of the country multiplied by an estimated weighted average percentage difference between Canadian and world prices for those goods. The study uses 1963 trade data and 1966 price data to estimate this effect, although many difficulties with the data are acknowledged. The effect on British Columbia is calculated to be \$55 million (in 1963 dollars) on imports of consumer goods from the rest of Canada. (b) A similar interregional transfer effect for capital goods is also estimated, although price differential data were unavailable and tariff rates were used instead. This effect is estimated at \$60 million (1963 dollars). (c) A “cash-cost” of protected regional production similar to the concept used by Young (1957) is estimated but applied only to the increment of production induced by protection. This increment is estimated from an analysis of production conditions and, in the absence of price data, tariff schedules. An estimate of about \$60 million is obtained. (d) Lost revenues on exports due to the existence of foreign tariffs are also included in the study. Using export and foreign tariff data, lost revenues on existing levels of exports are estimated at about \$10 million.

The total of these four measures yields a combined cost estimate of \$185 million, or about 5.5 percent of B.C. personal income. As the authors note, the approach used is a partial equilibrium one involving many restrictive assumptions. Given the roughness of the estimate, the authors suggest that the range of costs might lie between 4 and 7 percent.

Wonnacott

In Wonnacott (1975), the earlier estimates of bilateral free trade in Wonnacott and Wonnacott (1967) are revised in light of intervening measures to liberalize trade (including the Auto Pact and Kennedy Round). According to Wonnacott, the somewhat improved Canadian productivity performance, relative to the United States, between the early 1960s and 1974 was due in part to these measures.

The gap between Canada and U.S. wages, used to proxy the gains through increased productivity in the 1967 study, had closed by 1974. (This was true only in 1976 when measured by total compensation, as noted in Wonnacott and Wonnacott, 1982. The Canada-U.S. ratio had fallen to .89 by 1981.) Wonnacott suggests that the relative wage levels were in disequilibrium, given that total factor productivity in the United States was about 27 percent higher than in Canada. In any case, Wonnacott emphasizes that the existence of a relative wage gap is not necessary for gains from free trade to exist because there are also benefits from exploiting economies of scale and further specialization according to comparative advantage.

In re-estimating the long-run gains from bilateral free trade, Wonnacott considers three sources of benefit: (a) comparative advantage specialization; (b) recapture of tariff revenue on Canadian exports previously paid to the U.S. government by Canadian producers; and (c) increased productivity of labour (and other factors of production) due to economies of scale. For items (a) and (b), he uses an estimate by Williams (1978) (reviewed below) of about 2.3 percent of Canadian GNP. As the Williams study assumes constant average costs of production, it does not incorporate item (c).

To estimate (c), Wonnacott considers the effects on the real income of Canadian factors of production should bilateral free trade eliminate the Canada-U.S. productivity difference of about 27 percent. As the 1973 ratio of value-added in manufacturing to GNP was .22, the gain as a fraction of GNP would be $.27 \times .22$ or 5.9 percent. This gain would be larger if economies of scale exist beyond manufacturing.

The total gains could thus amount to 8.2 percent of GNP. Given the uncertainties of the estimation, Wonnacott puts the gains in the range of 7 to 9 percent, somewhat lower than the 7 to 10.5 percent range of the 1967 study.

Balassa

At the same time as studies were being undertaken in Canada on the long-run effects of liberalization in Canada-U.S. trade, studies abroad were examining similar issues affecting other countries. While the results of these studies are not of direct relevance to Canada, they do suggest the orders of magnitude of different components of real income gains which might accrue under different types of trade liberalization. One of the more significant is that by Balassa (1975), who reports rough estimates of the income gains from the formation of the European Common Market.

This study begins by considering the “static gains” from the more efficient use of resources under free trade within the European Community (the welfare triangles from Figure 1-A1 in Appendix A). Balassa calculates a welfare gain from the increased trade in manufactured goods among EC countries of 0.15 percent of GNP, using 1970 data. He also makes an attempt to incorporate the effects of economies of scale and intensified competition in a wider market. Assuming that the gains from the widening of national markets pertains only to the increment of trade created by the establishment of the Common Market, Balassa makes a rough calculation of the gain in GNP as 0.5 percent.

There is, however, no reason to suppose that cost reductions due to rationalization effects and economies of scale are limited to this increment in intra-area trade. As Balassa notes, the benefits of these structural changes may extend to all intra-area trade in manufactures or to the entire manufacturing sector in all countries. However, no estimates are made under these assumptions.

Balassa also notes that integration can affect the share of fixed investment in GNP — an increase of one percentage point here leading to a 0.2 percent per annum increase in the rate of growth of GNP. Between the period from the establishment of the Common Market in 1965 and 1970, there was an increase of 4 percentage points in the share of fixed investment. However, to consider the welfare gain that this involves, one must take account of the welfare loss due to postponed consumption.

Cline et al.

The approximately 5:1 ratio of static to total gains, including the dynamic gains, in Balassa's study (calculated as $.15/ (.15 + .5 + .2) = .18$ or 1:5.48) has been used elsewhere. Cline et al. (1978) use this ratio in estimates of the welfare gains to various countries, including Canada, from various tariff-cutting formulae put forward in the Tokyo Round negotiations. The study estimates the impact (but not the longer-run general equilibrium) effects of multilateral tariff cuts by calculating the static welfare gains (on an annual flow basis) for the United States, Japan, Canada, the EC and seven other industrialized countries.

In the case of a 60 percent cut in all tariffs except those on textiles and crude and refined petroleum, the annual gains to Canada are estimated at \$178 million in 1974 U.S. dollars. This compares with \$245 million if textiles are included in the tariff cuts. The gains to the United States, for example, are \$490 million, or \$990 million including textiles.

Cline also provides estimates that take account of the gains due to increased economies of scale, incentives for greater technological change and the stimulus provided to investment. Using as a proxy the 5:1 ratio from Balassa as an estimate of the ratio of *total* to static gains (a more conservative ratio than Balassa's actual estimate), the annual gains to Canada from this form of multilateral trade liberalization would have been approximately \$870 million 1974 Canadian dollars or about 0.6 percent of GNP in 1974.

Williams

A subsequent study concentrating specifically on Canada-U.S. free trade is that of Williams (1978). He uses a general equilibrium linear programming approach along with 1961 input-output data for Canada and 1961 data on both Canadian and U.S. tariffs (with some adjustments for the Kennedy Round tariff changes). He considers 103 commodity aggregates, with tariffs computed as weighted averages for each. The key assumptions include fixed coefficients of production, constant returns to scale, and the assumption that all Canadian producers with the exception of those in the resource sector are price takers on world markets.

Williams' main aim in constructing his model is to solve the problem of finding the maximum output of consumption goods for Canada, subject to the availability of resources. The model is solved both with and without tariffs, to estimate the increase in consumption goods made possible by tariff removal. (Non-tariff barriers are not incorporated into the analysis.)

In the model, the cost of the tariff is calculated as the value of the consumption that must be taken away in the free trade situation so as to leave the country at the same level of welfare as that attained with protection. Holding all other items in final demand constant, Williams calculates that the elimination of Canadian tariffs leads to only a 1.36 percent increase in the value of consumption. The elimination of U.S. tariffs leads to only a 2.03 percent increase in consumption in Canada, while elimination of both tariffs leads to a 3.97 percent increase. This latter estimate is equivalent to 2.6 percent of GNE in 1961.

Another way in which the model can be solved is to hold all final demand items constant with the exception of investment goods. This results in a 5.33 percent increase in the availability of investment goods from the elimination of the Canadian tariff, a 6.79 percent increase from the elimination of the U.S. tariff and a 9.12 percent increase if both tariffs are eliminated.

Williams notes that the cost of both Canadian and U.S. tariffs to Canada is considerably larger when measured in terms of investment goods. In 1961 Canadian dollars, the consumption cost is slightly over \$1 billion, while the investment cost is \$1.32 billion. He concludes that "the tariff has a more inhibiting effect on economic growth than it has on the annual level of consumption. The cost of the tariff measured in terms of investment goods is larger in both percentage and absolute terms" (p. 30).

Williams also describes his estimates of the long-run gains to Canada from free trade as an underestimate for a number of reasons: (a) substitution in production is precluded by his fixed coefficients assumptions; (b) substitution in consumption (due to changes in relative prices) is ignored; (c) gains due to economies of scale and increased market size are omitted; and (d) errors enter due to aggregation (the model restricts production in each classification to the proportions prevailing in the 1961 data base). These factors suggest that the estimated gains are conservative since they concentrate on the static resource misallocation effects of the tariffs and ignore scale economy effects.

The Williams study also provides some indications as to which sectors would expand or contract under free trade. It should be noted, however, that the model constrains the expansion or contraction of an industry to 10 percent. The author concludes (p. 12) that "to go beyond the ten percent change would constitute an unwarranted extrapolation of the

industry level results.” The aim of the model at this level is therefore only to identify where expansion or contraction takes place.

Williams finds that those industries which tend to expand are ones which share at least some of the following characteristics: (a) they face a high U.S. tariff; (b) they receive little protection from the Canadian tariff; (c) they have higher input costs due to the existence of the tariff; and (d) they produce more end products. Williams concludes both from the aggregate results and from more specific sectoral studies in which supplementary information on scale economies can be used, that the joint removal of tariffs in Canada and the United States would favour end-product manufacturing. This qualitative conclusion also agrees with the results of Harris (reviewed below).

Boadway and Treddenick

The model used in Boadway and Treddenick (1978) is related to that of Williams but involves explicit demand and production functions. A general equilibrium model is constructed based on a 1966 data set (including input-output tables) to estimate the effects on resource allocation and factor prices of unilateral free trade. It differs from Williams’ model in including taxes, factor substitution in production and various values for the elasticities of import supply and export demand (i.e., Canadian exporters need not be price takers). The 1966 data set is reproduced by the model, using an appropriate choice of parameters. The equilibrium solution is then recomputed setting Canadian tariffs to zero.

Under a wide variety of assumptions about many of the parameters, the effects on an index of Canadian welfare are small (a gain or loss of 1 percent or less). The authors attribute the possibility of losses to the potential for an unfavourable effect on the terms of trade (the ratio of export to import prices) from the removal of tariffs. This could occur if the small, open price-taking economy assumption is not appropriate for Canada, at least for exports.

Boadway and Treddenick’s estimates also show that the effect of the Canadian tariff is to discourage the production of traded products and encourage the production of non-traded ones. It also tends to discourage production in primary and manufacturing industries.

Dauphin

Another estimate of the effects of unilateral free trade is that by Dauphin (1978). This study makes use of Williams’ results in attempting to estimate the impact of the elimination of Canadian tariffs and some non-tariff barriers on both the regional and functional distribution of income. A three-factor model is used, with complete specialization of production

in each of five regions. Capital and labour are assumed perfectly mobile within Canada (except in Quebec). Dauphin uses 1971 Canadian input-output data to proxy for the input-output data for each region.

The study assumes that the total gains to Canada from unilateral free trade are 2 percent of Canadian GNP, an assumption made with reference to Williams' results. Dauphin calculates that real incomes would increase in the Atlantic region, the Prairies and British Columbia, with little change in Ontario and Quebec although a larger increase in real wages occurs there.

Pinchin

The study by Pinchin (1979) of the regional effects of unilateral free trade resembles those of Young and Shearer in the techniques employed. The aim is not to estimate the welfare cost of the Canadian tariff resulting from the consumption and production losses it induces. Instead, the tariff is viewed as a tax on consumers accruing either to Canadian producers (Young's subsidy equivalent) or to the Canadian government as tariff revenue. An estimate is made of the size of interregional transfers from consumers in one region to producers in another.

Using Young's method, Pinchin estimates the cash cost of the Canadian tariff in 1970 to have been 3.48 percent of personal income. He then estimates the size of the interregional transfers. These calculations are complicated by the necessity to take into account the distribution of the government's duty receipts and the existence of interregional trade in intermediate goods, which may also involve a premium due to the tariff.

Pinchin also argues that the prices that would prevail in Canada after unilateral tariff reduction would be affected by the resulting devaluation of the Canadian dollar. A calculation with a 10 percent devaluation shows a sharp reduction in the regional gross cash cost of the tariff (gross of government tariff revenues) from almost 5 percent of local personal incomes to a little more than 2 percent. Interregional transfers to Ontario and Quebec from the other regions occur but are considerably smaller than in the case without devaluation. Interregional gains or losses are less than 1 percent of 1970 regional income. Pinchin notes that this conclusion is further complicated by the effect on regional income of removal of the tariff, the potential migration that could occur, and the possibility of increased unemployment during the adjustment period. He nevertheless concludes that the purchasing power of all regions would be enhanced by removal of the Canadian tariff. This would be particularly true for the Atlantic, Pacific and Prairie regions, which would no longer have to subsidize protected producers in Ontario and Quebec.

Harris and Cox

The most recent of the modelling evaluations of Canada's trade options is that due to Harris and Cox (1984), who have also developed a static general equilibrium model of the Canadian economy to which trade policy questions may be addressed. The model explicitly incorporates scale economy and imperfect competition effects and is analytically more tightly specified than those used in most of the earlier studies. Consequently, its results have had a major impact on the trade policy debate in the country. The effects of unilateral free trade, full multilateral free trade, bilateral free trade with the United States and a form of sectoral free trade with the United States have been estimated and reported on in a number of publications, including the paper by Harris in this volume.

The model consists of 29 domestic industries, of which 20 are imperfectly competitive manufacturing industries using production processes with increasing returns to scale, and 9 are competitive non-manufacturing industries using production processes with constant returns to scale. There are two goods in each industry (domestically produced and imported), which are close but imperfect substitutes. Canada is assumed to be an "almost" small open economy — a price taker for imports but a price maker, to some extent, for exports. The elasticities of export demand used in the model vary by product. Capital is assumed to be both internationally and intersectorally mobile and in perfectly elastic supply. Labour is in fixed supply and is intersectorally mobile but internationally immobile.

Within each non-competitive industry all firms are identical. The number of firms is endogenous in the long run as firms enter and remain in response to above- or below-normal profits respectively. Price setting by non-competitive firms is assumed and taken to be a weighted average of a monopoly price, set by each firm according to its perceived demand curve, and a collusive price, under which all firms set a price equal to the world price plus the tariff. The set of prices that clears both goods and factor markets characterizes an equilibrium in the model.

The model uses 1976 data as a benchmark from which a long-run equilibrium is calculated. This long-run equilibrium is used as the comparison point for a series of counterfactual equilibrium calculations for a variety of trade policy changes. Each long-run equilibrium calculated under changed policies is compared to the reference long-run equilibrium to determine the welfare gain or loss to Canada of the policy change, along with information on changes in relative prices, industry outputs and input demands.

Included in the data set are five sets of parameters which affect results from the model:

- The export price elasticities Canada faces. These influence the extent of penetration of foreign markets under reductions in trade barriers abroad.
- Import price elasticities.
- A weighting parameter which determines whether prices are set more according to collusive or monopolistic behaviour. This, in turn, influences the strength of the rationalization effect following free trade.
- Trade policy parameters. Foreign and Canadian tariffs and some estimates of ad valorem equivalents of some NTBs (but by no means all) are used, with attempts made to update the data in more recent work to incorporate some of the Tokyo Round changes in tariffs.
- Parameters for the slope or elasticity of the average cost curves for non-competitive industries. These parameters are crucial in determining the size of potential gains from rationalization effects, elimination of collusion, or penetration of foreign markets following free trade.

The values chosen for these parameters are based mostly on literature estimates. Sensitivity tests are conducted, the results of which are reported below.

Harris and Cox (1984) and Richard Harris's article in this volume report the following results for unilateral free trade and multilateral free trade. Under unilateral free trade, the results indicate a real GNP gain for Canada of 3.49 percent and a welfare gain of 4.13 percent (as a percentage of initial GNE). Real wages increase almost 10 percent from the reference equilibrium level. Under multilateral free trade the results show a real GNP gain of 7.02 percent and a welfare gain of 8.59 percent of GNE, with a 25.21 percent rise in real wages.

Results for bilateral and sectoral free trade with the United States are reported in Cox and Harris (1984) and in an appendix to the Harris paper in this volume. Under sectoral free trade, they consider the effect of the bilateral elimination of trade barriers in textiles, steel, chemicals, urban transportation equipment and agricultural machinery. This scenario is examined both with and without (mostly U.S.) export subsidies. The case with export subsidies provides the largest aggregate welfare gain: a 1.9 percent increase of base GNE (1.5 percent without the export subsidies since Canadians benefit from the existence of these subsidies). The total volume of trade with the United States rises between 13.6 and 16.3 percent.

Under bilateral free trade, they consider the mutual elimination of tariff and non-tariff barriers (including export subsidies) in all industrial sectors. In this case, the estimated gains are significantly larger than under sectoral free trade and even larger than under multilateral free trade. The aggregate welfare gain is calculated at 9 percent of base GNE, and an increase in real wages of 28.3 percent is estimated (as compared with 5.7 to 6.9 percent with sectoral free trade).

The gains predicted by the model include a number of different effects. The removal of the Canadian tariff forces rationalization in the manufacturing sector, a lowering of price-cost mark-ups, and an increased competitive climate inducing greater efficiency and specialization among firms. The removal of foreign tariffs is important in allowing scale economies in Canada to be realized. Production runs lengthen and domestic firms are more successful in penetrating foreign markets.

As Harris and Cox and others have warned, however, one must not accept the results of the model uncritically. Harris and Cox (1984) report tests of the model to gauge the sensitivity of its results to changes in the values of the parameters which interact to produce the estimates.

First, the results show sensitivity to the values of import elasticities. The greater import price elasticities are, the greater is the degree of industry rationalization induced by tariff removal, and thus the greater are the resulting gains. This is especially the case for unilateral free trade.

Second, results are sensitive to the values of the export elasticities used (both the price and foreign tariff elasticities of domestic export demand). The higher the export elasticity the greater the domestic rationalization of manufacturing that takes place as production in the economy becomes more specialized. In the multilateral free trade case, changing export elasticities from one-third of base elasticities to twice base elasticities results in welfare gains ranging from 4.1 to 17 percent of base GNE.

Also, the base values of parameters controlling the strength of scale economy effects are controversial and to some degree uncertain. The estimates of the model are sensitive to these values. Greater economies of scale increase the welfare gains as the economy becomes more specialized. Shifting the economies-of-scale estimates from 0.33 to 1.33 times base values results in welfare gains varying from 2.5 to 5.4 percent under unilateral free trade, and from 6.1 to 10.8 percent under multilateral free trade.

Results are also sensitive to the weights attached to the two pricing hypotheses. Here, varying the weights changes welfare gains from 4.3 to 16.3 percent for multilateral free trade.

The model also provides indications of the impacts for different industries under the different forms of trade liberalization. For instance, of the 29 industries examined in the original study, value-added increases in 20 under multilateral free trade. Industries which do not fare well under multilateral free trade tend to be the more labour-intensive and heavily protected industries such as clothing, knitting mills and furniture. The increase in real wages which results from the increased labour productivity in other sectors makes it harder for them to compete with imports.

Concluding Remarks

Studies beyond those discussed here exist, but our summary includes the most prominent of those undertaken over the last 30 years. The strong feature of these studies is the near unanimity of view, from Young to Harris and Cox, that significant gains are available to Canada from trade liberalization, especially from bilateral free trade with the United States. These gains, in addition, are projected as broadly spread throughout the country. The major differences between results from these studies tend to be quantitative, and not qualitative.

Appendix C

Short-Run Costs of Adjustment to Bilateral Free Trade and Other Trade Policy Changes

In addition to attempting to measure the long-run welfare gains from trade liberalization, some empirical work has also examined the short-run adjustment costs that result. These costs are incurred as factors of production become temporarily unemployed due to the change in trade policy. The social costs from these adjustments are commonly measured as the amount of foregone output society suffers as displaced labour and capital are re-allocated. If one assumes that factors are paid their marginal product, a calculation of the foregone income of the displaced factors provides an estimate of the value of this foregone output. Given estimates of both the benefits and costs of trade liberalization, the difference constitutes the net benefits. If the benefits outweigh the costs, one can conclude that the policy is desirable.

There are, however, also questions of equity. In addition to the social costs of adjustment, there are private costs incurred in being unemployed and in relocating. It is not unreasonable for these workers to expect compensation and assistance through general schemes such as unemployment insurance, or through more narrowly targetted adjustment assistance programs. (These issues are discussed in *Domestic Policies and the International Environment*, Volume 12 of the Commission's research series, and also in Glenday, Jenkins and Evans, 1982.)

Not all of the studies of multilateral or bilateral trade liberalization reviewed in Appendix B attempt to measure either the amount of labour and capital displaced as a result of bilateral or multilateral free trade, or the cost of these displacements. It is nonetheless possible to gain from these studies an overall impression of the orders of magnitude involved.

Williams (1978)

From Williams, one might conclude that adjustment costs under bilateral free trade would be relatively small. This is due to the fairly small changes in the relative size of each sector. Increased specialization under free trade occurs mainly within each sector; the bulk of the re-allocation of labour would be intrasectoral. This is generally presumed to be less costly than intersectoral re-allocation.

Harris and Cox (1984)

Harris and Cox provide estimates of labour re-allocation between the 29 sectors of their model under various forms of free trade. Under unilateral free trade, about 4 percent of the labour force re-allocates intersectorally. With multilateral free trade, this rises to over 6 percent. Further results reported in this volume have almost 7 percent of the labour force shifting sectors under bilateral free trade with the United States. A more limited bilateral sectoral free trade agreement would reduce this to about 2 percent. While 6 to 7 percent may not seem a particularly large figure, Harris and Cox nonetheless conclude that substantial retraining of the labour force would be required. The fact that both employment-gaining and employment-losing industries tend to be geographically concentrated (largely in Ontario and Quebec) may tend to lessen the costs of adjustment.

As in the Williams study, a significant amount of intra-industry adjustment also occurs. This is revealed by significant changes in the number of plants and firms in certain industries. Labour-intensive industries seem to experience the largest employment losses.

While Harris and Cox do not attempt to quantify the actual costs of adjustment, they conclude that these costs could be substantial. Appropriate adjustment policies would therefore be required both to offset these effects and to make a reduction in trade barriers more acceptable to those adversely affected.

Cline et al. (1978)

In their examination of the effects of various forms of multilateral tariff liberalization involving the major OECD countries, Cline et al. (1978) also estimate the effects on employment across major product categories.

ries. Aggregate changes in employment are calculated with 1974 data. Using estimates of changes in trade flows by sector, the authors apply both direct and indirect input-output job coefficients to obtain an estimate of the impact effect on employment in each sector. For Canada, 1970 U.S. job coefficients are used to obtain employment estimates. (These job coefficients are the number of jobs per unit of gross output value, including those for intermediate inputs.)

Their aggregate results show that in Canada further multilateral trade liberalization will mean a net loss of jobs no matter which of the various types of trade liberalization is actually adopted. The authors point out that the net loss of jobs is greatest under the approaches that liberalize trade the most. If, however, a relative measure is used (a ratio of the increase in export-related jobs to the decrease in import-competing jobs), a more liberal approach is the most attractive. Oddly enough, by this measure, the most favourable change for Canada is a Canadian formula approach to the tariff cutting proposed in the Tokyo Round (eliminating tariffs less than 5 percent, halving those between 5 and 40 percent and setting those over 40 percent to 20 percent).

While multilateral trade liberalization appears to lead to a net job loss, it must be borne in mind that these are impact effects only. The effects of subsequent wage adjustment on employment are ignored. Also an important feature of all their estimates is the small size of the employment effects.

For example, under a 60 percent multilateral tariff cut from pre-Tokyo Round levels (excluding petroleum and textiles) and with elimination of tariffs of less than 5 percent, Canada is estimated to lose 77,100 import-competing jobs (less than .9 percent of total employment) and to gain 29,900 export-related jobs for a net loss of 47,200. Excluding complete multilateral free trade, the most unfavourable trade change for Canada would result in a net job loss of .57 percent of total employment.

If textiles are included in the trade liberalizations, the net direct job loss increases. In the same 60 percent tariff cut case considered earlier, net job loss for Canada rises from 17,900 to 23,600. The net job loss in textiles, however, amounts to less than 3 percent of sectoral employment.

Estimates of employment effects of trade liberalization can also be converted into estimates of labour adjustment costs. Comparing these to the estimated benefits from trade liberalization yields the net gains. The authors calculate labour adjustment costs per job displaced for any country based on the average weekly wage in that country and a 30-week period of unemployment for the import-displaced worker, based on a U.S. estimate of the average duration of unemployment. Multiplying this by the number of jobs (both direct and indirect) displaced by imports gives an estimate of the total cost of labour adjustment. These labour adjustment costs are overestimates, however, as they omit the effects of

facilitated labour absorption through increased export job opportunities and of increased domestic real income and consumption. They also ignore the fact that trade liberalization is phased in over time.

Their estimate for Canada for adjustment costs under a 60 percent multilateral tariff cut (excluding textiles but eliminating all tariffs of less than 5 percent) is \$286.8 million (1974 US). The ratio of estimated long-run welfare gains (reported in Appendix B) to short-run adjustment costs is 62.2:1. The corresponding figure for the United States is 80.4:1. No adjustment cost is attributed to the obsolescence of fixed capital because its social opportunity cost is assumed to be zero after the change in trade policy.

Baldwin, Mutti and Richardson (1980)

While this work only studies the effects on the United States of a multilateral tariff reduction of 50 percent, their investigation of both welfare gains and adjustment costs obtains results similar to the Cline study and so is worth noting here. The authors use 1971 trade and tariff data for 18 major U.S. trading partners and 1967 input-output data for the United States. Previous estimates of import and export price elasticities of demand are used.

The gains from liberalized trade are estimated within a partial equilibrium framework, as explained in Appendix A. As in the previous study, changes in labour requirements are calculated by multiplying labour coefficients from U.S. input-output data with estimated changes in domestic output for 367 sectors. The duration of unemployment of displaced workers is estimated using the social and economic characteristics of workers in each sector. This study, unlike the Cline study, calculates the effects of export expansion on the reduced duration of unemployment in exporting sectors. These are then deducted from the cost of displacement in import-competing sectors to arrive at a net figure. It is assumed that there is “involuntary unemployment” involving a welfare cost to society in all sectors. Those displaced in import-competing sectors are not assumed to be instantly re-employed in an exporting sector. The average wage in each industry is used to estimate the labour income lost or gained.

This study, unlike Cline et al., also estimates the income lost due to capital in industries left with excess physical capacity after the change in trade policy. The numerical results show that the welfare gains dwarf adjustment costs by a ratio of 25:1. Again, the net employment effect — a loss of about 15,000 man-years — is fairly small relative to total employment. While there is significant unemployment and even a negative net welfare effect in some industries, the authors state that this does not imply support for maintenance of tariffs. Instead it implies that tariff reductions should be phased in gradually to ease the cost of transition.

Jenkins and Montmarquette (1979)

Studies have been done in Canada to estimate the social cost of displacing workers from protected or declining industries. Jenkins and Montmarquette evaluate the private and social cost of the layoffs of workers from the aircraft industry in Montreal between 1972 and 1975.

The authors estimate the private and social values of incomes of different categories of workers both before and after the layoff. The social value is higher than the private value by the amount of tax paid on the income. However, explicit or implicit subsidies or tariff protection to the industry lowers the social value of the income earned in that industry. In the case of the aircraft industry, liberal credit provisions for foreign purchasers constitute an implicit subsidy.

Jenkins and Montmarquette find that both the social and private value of the income subsequently earned by laid-off workers varies significantly depending on the worker's age. Older workers suffered the greatest decline in income when compared to their earnings before layoff. The rate of unemployment in the general labour market also had a significant effect on the amount of lost private income. This effect is greater the older the worker.

The social cost of displacing workers thus depends on these variables: the age composition of the displaced labour force; the rate of unemployment in the region; and the amount of subsidies or protection received by the firm. In the case where the subsidies were assumed large enough to reduce the social value of workers' income to 70 percent of its market value, Jenkins and Montmarquette find that the social cost of the layoffs in the case examined lay between 3 and 21 percent. This is expressed as a percentage of the present value of their social product before layoff. The authors regard this as a minimum estimate, given biases present in their calculations.

Significant differences existed between the different age groups. For the group under age 45, social gains of 20 to 31 percent were estimated. This compares with social losses of 24 to 46 percent for the group over age 55 who do not choose retirement. The 3 to 21 percent aggregate estimate is an average weighted by the numbers in the different age groups.

Jenkins and Montmarquette conclude that to be effective, adjustment assistance programs must be flexible and narrowly targetted. They should therefore vary with the age composition of the labour force, the unemployment rate in the region and the amount of taxes or subsidies that pertain to the sector.

Jenkins (1980)

This study examines the potential consequences on employment of removing Canadian quotas on clothing imports. Jenkins first estimates the increase in domestic production due to both tariffs and quotas on clothing. Then data on man-hours required per unit of production for each class of clothing are used to produce estimates of the additional employment in garment production gained by protection. Using 1979 data, Jenkins estimates that 7,458 man-years of increased employment were gained by the tariff and 6,016 gained by the quota. Combining this with his estimates of the cost of protection in this sector implies a loss per man-year of employment of more than \$17,000 per year due to protection. Of this, more than \$14,000 is due to quotas. In contrast, the average annual wage in 1979 for a clothing worker was just under \$10,000.

Jenkins concludes that the use of clothing quotas is so wasteful that gains would even result from simply removing the quotas and paying the displaced workers their former salaries. In fact, he suggests that the latter would not be necessary as the evidence indicates that most could find employment elsewhere.

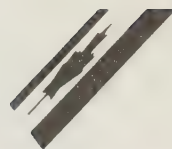
Conclusions

The empirical work that has been briefly summarized here seems to provide consistent results. While adjustment to trade liberalization clearly involves costs for displaced factors of production, estimates indicate that the social costs are generally outweighed by the gains. The private costs borne by a displaced worker, however, are far from negligible. Considerations of equity, efficiency and political expediency would seem to favour compensation and adjustment assistance to those affected.

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A Possible Canada-U.S. Free Trade Arrangement

Summary of the Proceedings of a Research Symposium

RODERICK HILL AND
JOHN WHALLEY

Of all the diverse elements which enter decisions on trade policy in Canada, questions concerning policies with the United States are widely agreed to be central. The United States is by far Canada's largest trading partner, accounting for more than 70 percent of both our imports and exports. This relationship arises partly because of geographical proximity, but also because of the large size of the United States within the global economy. As a result, both the trade policies that Canada pursues with the United States and the treatment received in return are central trade policy issues for Canadians.

Because the issue of Canada-U.S. free trade had been extensively studied prior to formation of this Royal Commission, our research effort in this area was initiated through a symposium held on October 6, 1983, in which various participants (listed at the end of this paper) were invited to summarize their previous work on this issue. Further aspects of the issue, such as regional impacts and sector-specific issues, were also discussed.

Twelve summary papers were presented in four sessions of three papers each. In the first, Harry Eastman, Richard Harris and Ronald Wonnacott presented arguments in favour of a Canada-U.S. free trade arrangement. They stressed the benefits for Canada arising from increased penetration of the larger U.S. market and the advantages of greater security of access to that market. These gains come about through rationalization and increased productivity of Canadian industry that results.

In the second session, Fred Lazar, Mel Watkins and Bruce Wilkinson outlined their reservations concerning a free trade arrangement. These centred on the possible threats posed to Canada's national sovereignty, the increased vulnerability of the Canadian economy to outside distur-

bances, concerns that the gains may not be as large as some advocates claim, the costs of the adjustments involved, and the possible consequences of a subsequent abrogation.

The third session took up some of the sectoral issues which arise in approaching free trade with the Americans. Carl Beigie discussed Canada's experience with the Canada-U.S. Automotive Products Agreement (Auto Pact), Colin Carter discussed Canada-U.S. agricultural trade, and Walter Haessel discussed trade aspects of energy policies.

The final session discussed various regional perspectives on the free trade issue. John Earl presented the view from the East, Ronald Shearer the view from the West, and Rodrigue Tremblay the view from central Canada. All sessions involved lively exchanges, and a number of further important contributions were made from the floor.

This overview summarizes the issues raised in the symposium both in the papers and in subsequent floor discussion. The papers by Earl, Watkins, Wilkinson and Wonnacott and the remarks by William Diebold to the final session of the symposium appear in this volume.

Arguments in Favour of a Canada-U.S. Free Trade Arrangement

Papers were presented in the symposium by Harry Eastman, Richard Harris and Ronald Wonnacott on the arguments for pursuing a free trade arrangement with the United States. These were followed by an extensive floor discussion.

The arguments in favour of a Canada-U.S. free trade arrangement hinged largely on the gains to Canada from improved access to the large U.S. market resulting from lowered U.S. trade barriers under a bilateral agreement. An important point emerging from the symposium was the sharp difference drawn between a unilateral move towards free trade by Canada, and a bilateral free trade arrangement with the United States. Since most of the gains to Canada would come from increased access to foreign markets, reducing foreign trade barriers through bilateral free trade was widely agreed to be more important than reducing our own barriers through unilateral free trade.

It was also agreed that gains to Canada from penetration of the U.S. market under a free trade arrangement depend on the potential for exploiting economies of scale in Canadian industry (i.e., the possibility that increasing the scale of production leads to lower average costs per unit). If these effects are large, firms can increase their specialization in particular products, increase exports, and lower costs. If, as some participants argued, there are non-competitive elements in Canadian industry, the removal of Canadian trade barriers can also allow economies of scale to be exploited. This would follow if increased competitive

pressures from freer trade were to force a more efficient reallocation of resources both within and between sectors. As cheaper imports put pressure on certain higher-cost Canadian production, firms would be induced to rationalize production and to reduce costs.

To some extent tariff reductions stemming from previous rounds of negotiations under the General Agreement on Tariffs and Trade (GATT) have increased the openness of the Canadian economy over time and have promoted rationalization. The ratio of our exports of goods and services to GDP, for example, increased from 22.9 percent to 32.7 percent between 1965 and 1980. A Canada-U.S. free trade arrangement was therefore portrayed as accelerating the postwar process of reducing trade barriers in Canada under the GATT rounds, but one which would probably yield larger gains to Canada because of the importance of the trade partner involved.

Harry Eastman cited the large amount of theoretical and empirical evidence accumulated in the last twenty years by Canadian economists in their investigation of the relationship between tariffs, market size and efficiency in production. He emphasized that results from this work have been strikingly consistent. Other recent work has also found comparable results in a dynamic setting whereby changes in tariffs lead to changes in market size which in turn lead to increased plant scale.¹ Eastman therefore stressed the gains which would flow from increased rationalization of Canadian industry following a move towards free trade with the United States.

In his paper, Ronald Wonnacott presented further arguments in favour of Canada-U.S. free trade. He noted that trade theory has long provided powerful arguments for "small" countries to seek trade liberalization. If, for example, domestic producers take prices on American markets as given, they must absorb the cost of U.S. tariffs. The burden of this cost disadvantage is eventually borne by Canadian factors of production, chiefly labour. The result is a transfer of income from Canada to the United States. However, when the tariff in Canada is considered in light of the price-taking assumption, Canadian producers raise their price of import-competing products above world market prices by the amount of the tariff. Canadian consumers therefore bear the burden of the Canadian tariff in the form of higher prices for both imports and import-competing goods. The result is a transfer of income between groups within Canada as well as a misallocation of resources in production.

Beyond the issue of whether or not there are gains to Canada from free trade with the United States, the three papers all mentioned the size of the potential long-run Canadian gains (ignoring transitional adjustment costs) from a free trade arrangement. They all suggested that most Canadian economists would probably agree that there are economic gains to be had from such an arrangement, and that many would argue that they may be quite substantial.

Richard Harris presented results from his work on a numerical general equilibrium model of Canadian trade, production and welfare, which was constructed to examine alternative trade policy changes.² Using data from the mid-1970s, he found gains to Canada from complete multilateral free trade of around 8 to 10 percent of GNP. He argued that the gains from a Canada-U.S. free trade arrangement would likely be at least as large. Gaining better access to the U.S. market would realize most of the benefits obtainable from a large market. In addition, with a free trade agreement limited to the two countries there would be a trade creation effect in favour of the smaller country. As barriers between the two countries are lowered, some trade diversion would take place as third countries who were previously the lowest cost source of supply are displaced by the partner country in the free trade arrangement. Because of the difference in size between the two countries, Canada would benefit relatively more from this effect.

Harris listed further factors influencing the size of the estimated gains from bilateral free trade.

- Free trade in energy would increase the size of the gain beyond that estimated by Harris, which pertained to manufactured goods only.
- The results of future Tokyo Round tariff reductions would give smaller gains than implied by Harris's mid-1970s data, because a future free trade arrangement would already incorporate lower tariff barriers. However, some researchers have argued that lower tariffs have been largely offset by increased non-tariff barriers (NTBs) so that a significant free trade arrangement also including non-tariff barriers may yield effects comparable with those estimated by Harris's study.
- The extent of potential scale economies would be crucial to attaining the level of benefit forecast by Harris, so conservative estimates were used. The same model without scale economies indicates gains from complete free trade would be less than 2 percent of GNP. The extent of these scale economies in traditional manufacturing remains a contentious issue, especially as some fear that Canada may be losing its comparative advantage in these activities.
- The price responsiveness of exports is essential to achieving the estimated gains, so again conservative estimates were used.
- Socially wasteful transport costs from the trade diversion created by Canadian trade barriers would reduce benefits. These are not included in Harris's analysis.³

Harris also noted that other estimates of the gains from bilateral free trade have been of the same order of magnitude as his. Wonnacott and Wonnacott (1967) and Wonnacott (1975) also suggested a gain to Canada from a Canada-U.S. free trade arrangement of around 7 to 10 percent of GNP.

Those who presented papers during this session of the symposium also focussed on who would gain and who would lose as a result of the changes brought about by a bilateral free trade arrangement. The point was made that one cannot say *a priori* whether the manufacturing sector would expand or contract, because the removal of Canadian and American barriers have offsetting effects. The question becomes an empirical one.

The Harris model predicated a substantial expansion of the manufacturing sector whose trade balance would move into a significant surplus position. Exactly which industry gains or loses is not specified, although which types of industries are affected can be inferred. Capital-intensive industries facing significant trade barriers with the U.S., such as resource-processing industries, would expand. Labour-intensive industries would tend to contract, although competitive pressures would not be as great, because these industries are also heavily protected in the United States.

The papers identified two major ways in which the gains are distributed: changes in factor prices (chiefly wages) and lower prices for consumer goods. Increased real wages in the manufacturing sector have further consequences for industry, tending to raise the aggregate capital-to-labour ratio. In the Harris study, real wages in manufacturing would rise under multilateral free trade by 20 to 25 percent, with an increase in labour productivity of a similar order. Thus free trade would narrow the productivity differential between Canada and the United States. This result arises endogenously from the model. Some previous work has assumed this result. However, it has been questioned on the grounds that free trade between regions in Canada has not removed interregional productivity differentials and thus doubt has been raised as to whether such an effect would work internationally.

Other arguments for a bilateral free trade arrangement emerged during discussion of the papers. One involved the relative desirability of pursuing trade liberalization with a multilateral or a bilateral focus. The seven GATT multilateral negotiating rounds to date have seen a substantial reduction of tariff levels, but major non-tariff barriers (NTBs) remain. Indeed, some symposium participants argued that the NTBs have increased as a result of the tariff cuts. Pressures for protection in many industrialized countries have been augmented by recent recessions and exchange rate movements, and by sectors facing stiff competition from Japan and newly industrializing countries. As tariff levels are bound by agreements, countries restrict trade by harsher application of existing GATT rules covering such devices as safeguard measures, anti-dumping and countervail duties. Measures such as voluntary export restraints have also been used in several countries that lie outside the GATT.

These non-tariff measures were generally agreed to be the most important instruments in the conduct of modern-day trade policy. They are

also complex and so far the GATT has been unable to deal with them adequately. Some participants therefore argued that it may be easier to deal with these problems on a bilateral rather than on a multilateral basis and, if so, it would make sense to begin with our largest trading partner. In support of a bilateral agreement, some participants pointed out that Canadians are more familiar with the U.S. legal system than that of almost any other country. U.S. trade policy seems clearer and more controlled by statute (rather than discretion) than are the systems of the European Community and Japan, our other two major trading partners.

The multilateral route has been supported in the past on the grounds that, as a relatively small country, Canada could offset its own limited influence by joining coalitions on certain issues of interest to it. The argument made for more actively pursuing the bilateral option was that multilateralism under the GATT may well be a clumsy way of handling our trade relations with the United States, since there is no guarantee that the issues of most interest to the two countries will be dealt with in the multilateral framework of the GATT.

It was also argued that, given current frustrations with the GATT, the ideal of multilateral free trade seems as remote as ever. Interim bilateral negotiations might therefore be the best way of maintaining momentum for trade liberalization. Bilateral agreements on specific NTBs, for example, might provide a model for broader agreements to follow. On the other hand, a bilateral arrangement might be viewed in third countries as one more step toward a world divided into regional trading blocs, which would further fragment the multilateral world trading system. Some participants felt that this perception would greatly concern both the U.S. and Canadian governments, who have been (and still are) strong supporters of the multilateral approach to trade policy negotiations.

Further discussion dealt with the implications of a possible Canada-U.S. free trade arrangement for existing GATT obligations. The general feeling seemed to be that the formation of a Canada-U.S. free trade area would not create special legal difficulties. Article XXIV of the GATT states that:

The contracting parties recognize the desirability of increasing freedom of trade by the development . . . of closer integration between the economies of the countries party to such agreement. They also recognize that the purpose of a customs union or a free trade area should be to facilitate trade between the constituent territories and not to raise barriers to the trade of other contracting parties....

It also states that, for both customs unions and free trade areas:

The duties and other restrictive regulations of commerce (except, where necessary, those permitted under Articles XI, XII, XIII, XIV, XV and XX) are eliminated on substantially all the trade between the constituent territories in products originating in such territories.

It was noted in the symposium that this has implications for sectoral free trade arrangements, a point which is discussed below.

The issue of its implications for the GATT was therefore seen as not so much legalistic as political. A move towards an explicit Canada-U.S. free trade arrangement could possibly serve to further fracture the multilateral system and, if this were true, it might cause Canada to hesitate before undertaking a bilateral commitment. As a relatively small trading nation, Canada has benefitted substantially from the GATT process through increased access to larger foreign export markets and the discipline that the multilateral rules impose on other countries.

Also, while barriers would not be raised against third parties, this does not imply that other countries would be unaffected. The trade diversion caused by a free trade area or customs union could significantly affect other countries. The extent of the trade diversion and whether or not it might provoke some retaliatory response was an issue which participants felt had not been adequately investigated. At best, it can be said that the scope for such diversion is limited, given the large percentage of trade between the two countries, large portions of which will be effectively free of tariff restrictions by 1987 (the end of the Tokyo Round tariff-reduction period).

A further point made was that a bilateral free trade agreement could be made less inimical to third parties by having it open-ended to permit other countries to join in the future, or by offering unilateral reductions in trade barriers in cases where substantial trade diversion would be likely to take place.

Potentially adverse developments in future U.S. trade policy of concern to Canada were invoked as a further argument in favour of a bilateral free trade agreement with the United States. It was noted that an increase in U.S. reliance upon a system of "contingent protection," such as the use of anti-dumping, countervailing duties and safeguard measures, could pose a potential threat to Canada.

It was pointed out that uncertainty about the application of rules makes exporting to the U.S. akin to investment under uncertainty. The effects of the size asymmetry between the two countries makes itself felt once again. Canadian firms must face a significant irreversible investment when they decide to enter the U.S. market. The existence of a "contingent protection" system, compared with a system relying on bound tariffs, increases the risk involved in penetrating this market. U.S. firms do not face such significant costs in entering the smaller Canadian market. Contingent protection in Canada therefore is less likely to pose such a threat to U.S. interests.

Also raised in the discussion was a potentially serious development in U.S. trade policy, of concern to Canada, in the form of "aggressive reciprocity." This involves various U.S. proposals to equalize U.S. levels of protection that are perceived by the United States to be lower

than those of another country. So far, this type of legislation has not been successful in Congress, but it is potentially worrisome. It was suggested that Canada could escape adverse consequences of such U.S. actions by entering a free trade arrangement with the United States.

Related issues were the possibility that the United States might adopt a more aggressive industrial policy with implications for Canada. While it is unclear what form such a policy could take, it would undoubtedly have a side effect that could not help but affect Canada adversely. A meaningful bilateral agreement could be used to try to limit U.S. actions which would be harmful to Canadian interests.

In summary, the main points emphasized in the papers favouring a free trade arrangement with the United States were the large potential gains from increased and more secure access to a large market. This would allow Canadian industry to exploit economies of scale and would yield productivity gains by rationalizing Canadian production. Related arguments focussed on the potential benefits from a more aggressive bilateral approach to Canada's trade policy with its dominant trading partner. These would become more significant if the multilateral GATT framework becomes more cumbersome and if potentially disturbing developments arise in U.S. trade policies (such as aggressive reciprocity) with adverse effects for Canada.

Reservations about a Canada-U.S. Free Trade Arrangement

The second session of the symposium focussed on reservations about a Canada-U.S. free trade arrangement. Papers were presented by Fred Lazar, Mel Watkins, and Bruce Wilkinson, which were also followed by extensive floor discussion.

Some reservations raised in the papers about a free trade arrangement have already been mentioned, such as trade diversion and the possible consequences for the GATT. The reservations raised in these three papers were diverse.

The paper by Mel Watkins focussed on concerns over Canada's political sovereignty. These have long been central arguments against a free trade arrangement.

These concerns centred on two issues. First, what constraints on domestic policy would Canada have to accept to reach an agreement? Second, if an arrangement were entered into, could the United States use the threat of abrogation to pressure Canada into complying with U.S. foreign policy objectives or to compel Canada to change its internal domestic policies?

The former concern arises because of the need for any meaningful agreement to come to grips with the trade-distorting effects of domestic policies. In Canada, regional development assistance is a primary exam-

ple. When federal and provincial grants were given to Michelin for a plant in Nova Scotia, countervailing duties were imposed by the United States. This action makes it clear that such policies have trade consequences, and the linkage would need to be extensively explored in any free trade agreement.

The discussion raised the point that U.S. policy already has a significant effect on Canadian policy, and a free trade agreement with the United States could provide an opportunity to remove some of the adverse consequences of this influence. Under the present state of affairs, Canadian policies are dealt with by unilateral action, decisions being made by the U.S. Department of Commerce and the U.S. International Trade Commission. Under a free trade agreement, a binational judicial body would likely oversee both American and Canadian trade policies along with their links to domestic policy. Based upon some set of principles established in negotiations, it would judge the trade-distorting effects of such policies, and it is possible that this could provide an improvement for Canada over the present situation.

However, under any set of principles established in negotiations, it is probable that Canada would have to explicitly accept restrictions on policy actions above and beyond what now exists. For instance, those features of the National Energy Program (NEP) and policies toward foreign investment that have irritated the United States in the past would likely be raised in negotiations. Restrictions on investment are a major U.S. concern at present, since trade and investment are seen by the United States as close substitutes.

For some participants in the discussion, this increased restriction on Canadian actions was actually seen as beneficial. Eastman, for instance, saw free trade as offering Canadians more freedom to maximize their economic welfare than at present, while offering the Canadian government fewer occasions for actions that have the appearance, but not the substance, of raising Canadian welfare over the free trade level.

Yet for others, the extent of Canadian economic integration with the United States is already far too high. Watkins expressed this view, arguing that Canada is a vulnerable, dependent economy. In considering a Canada-U.S. free trade arrangement, highly uncertain economic benefits would be traded for less freedom to pursue independent policies. These objections also pertain to sectoral rather than comprehensive arrangements. Increased economic integration, according to Watkins, risks disaster by disarming both Canadian resource and industrial policy instruments. In his view, the objective of policy should be to try to decrease rather than increase Canadian dependence on the United States. Canadian policies toward foreign ownership and multinational corporations should therefore be closely examined.

Those concerned with foreign ownership found further cause for worry from the predictions of Harris's model for capital inflows under a

free trade arrangement. Harris found that there was an inflow of capital from abroad as capital-intensive industries rationalized.

Another point raised was the possibility that a move toward further economic integration with the United States would change the long-run variability of Canadian GNP per capita. This situation would arise because U.S. business cycles would likely have a greater impact on Canada if the economies were more fully integrated. The ability, such as it is, of Canadian fiscal and monetary policies to influence the state of the business cycle might be further impaired, although a complete discussion of this was beyond the scope of the symposium.

The concern with threats of abrogation by the United States of any free trade agreement is closely associated with the issue of the adjustment costs of entering such an arrangement in the first place. The estimates of the gains from a free trade arrangement discussed in the first session of the symposium did not include the adjustment costs involved in the transition as labour and capital react to changed conditions. The crucial question was whether the short-run adjustment costs involved with free trade are larger or smaller than the discounted present value of the long-term gains, and whether these adjustment costs would need to be borne again under a readjustment should the agreement be abrogated.

Past experience with trade liberalization elsewhere, such as with the formation of the European Community (EC), the European Free Trade Association (EFTA) and the various GATT rounds, as well as empirical work on potential further trade liberalization⁴ seems to suggest that adjustment costs may not be that high. It was generally agreed, however, that a free trade arrangement would cause Canada to do most of the adjusting, and that this adjustment would be concentrated in central Canada. This geographical concentration might somewhat reduce the adjustment problems, but others warned that some labour-intensive industries, hit by both higher real wages and import competition, would possibly disappear. One estimate, quoted by Harris, was that at least 6 to 7 percent of the total Canadian labour force would have to shift between industries under a Canada-U.S. free trade arrangement. Intersectoral shifts will be more significant as considerable rationalization and restructuring take place within industries.

There was therefore widespread agreement on the need for extensive adjustment assistance, both to assist factors of production leaving declining industries and to promote their rapid absorption in expanding sectors. A bilateral agreement would therefore have to recognize the proportionately greater costs that Canada would face and take steps to alleviate it.

Wilkinson cautioned that considerable government involvement would be necessary. Decisions, either explicit or implicit, would have to be taken about which industries to support in reorganization and rationalization. This could lead the federal government into conflict not only with the provinces but also with the United States.

It was also widely agreed that any provisions concerning possible unilateral abrogation of the agreement would have to recognize Canada's increased vulnerability. Having made the adjustments to free trade, Canada would find reimposition of American trade barriers unacceptable. It was suggested that an agreement would have to find some way of equalizing the costs of a potential abrogation to both parties.

In his paper, Bruce Wilkinson also expressed concerns about the structure of Canadian industry after adjustment to a free trade arrangement. The issue was not posed as one of becoming hewers of wood and drawers of water; there was little disagreement expressed about the contention that the size of the manufacturing sectors would likely increase. Instead the fear was that Canada would be stuck producing "standardized machinery" where there are now economies of scale, and that possible future problems with eroding comparative advantage would favour developing countries. This point was also raised by Lazar, who added that these are the industries in which economies of scale are believed to be most important. The importance of economies of scale may therefore have been exaggerated by advocates of free trade.

Other commentators pointed out that Canada already has problem sectors which, even with the status quo, will probably have to be phased out, and access to the U.S. market might be their last chance to find themselves a profitable niche. Clearly, there is potential for much freer trade in labour-intensive products like textiles, apparel and footwear, where the United States still has high tariffs and offers Canada a protected market under free trade.

Wilkinson's reservations about complete trade liberalization with the United States arose from his concern that the gains may be overstated and the difficulties in attaining them underestimated. The result may be that Canada will yield more than it should in negotiations and reap a smaller net benefit.

He felt it unlikely, for example, that productivity differences between the two countries would be eliminated. As well, once the tariff cuts of the Tokyo Round have taken place, removal of remaining barriers will lead to relatively small improvements in the prices Canadian exporters receive.

Fred Lazar raised questions about the effects of free trade on the future of R&D and of high-technology industry in Canada, pointing out that the aim of trade and industrial policy ought to be to improve productivity and technological performance. He argued that other policies, frequently labelled "industrial policies," claim to focus directly on these problems and ought to receive equal consideration along with a policy of trade liberalization.

Lazar also questioned whether the gains from a free trade area would be as large as is often claimed. He had doubts that one could rely on Canadian firms to adjust and survive in a new competitive environment.

The technological, marketing and managerial skills of these firms may be underdeveloped, according to Lazar.

In summary, these three speakers were unconvinced that the size of potential benefits from a free trade arrangement was as large as had been suggested in the earlier session. Many points were raised, which chiefly concerned the difficulty of capturing the gains that are supposed to result from free trade and the risk posed to Canada's political sovereignty from closer integration with and dependence upon the United States.

Regional Aspects of Canada-U.S. Free Trade

In the session on regional aspects of a Canada-U.S. free trade arrangement, papers were presented by John Earl, Ronald Shearer, and Rodrigue Tremblay. The dominant theme that emerged was what might be called the reevaluation of the "traditional story" of the effects of the National Policy, which saw Atlantic Canada and the West losing from national tariff barriers that induced trade diversion. Cut off from some of their lowest-cost sources of imports, consumers in these regions are induced to buy higher-cost goods from a protected manufacturing sector in central Canada. This suggests that the removal of protection in a Canada-U.S. free trade arrangement would lead to gains for the East and West at the expense of central Canada.

However, the participants in the session stressed that recent research, which assumes the existence of increasing returns to scale in Canadian manufacturing, appears to suggest that all regions could gain even from unilateral free trade. In fact, if present production locations approximate future ones, under this scenario, central Canada would be the region to bear most of the adjustment costs and enjoy the biggest gains in factor incomes and employment. If this view of the regional impact of a move to free trade is correct, it enhances its desirability, since it involves fewer trade offs and conflicts with regional objectives than is often supposed.

In presenting a view from eastern Canada, John Earl stressed that the primary consideration about the effects of bilateral free trade should be its effects on employment opportunities. He found little evidence that the effects in the East, though positive, would be significant. Industries in the region consist mainly of competitive, export-oriented firms or of small firms serving only local markets that are already effectively insulated by high transport costs. Neither group would be much affected. The attractiveness of the region for investment would also be little changed, and the resource base, existing labour market deficiencies and the small, dispersed population would be unaffected. He pointed to the similar problems faced by Maine in the U.S. economy.

Benefits from freer trade would accrue to consumers directly through reduced prices and to the region indirectly as a result of the effects on the

rest of Canada. An increased rate of economic growth in the rest of the country increases the demand for labour and encourages more migration from the region. Tremblay, however, argued that out-migration may not be a very efficient adjustment mechanism as it may only tend to reinforce the decline.

While Earl concluded that the consensus in Atlantic Canada would probably favour free trade with the United States, he also argued that major adjustment problems have to be faced in the region with or without free trade. Non-viable industries now kept afloat with subsidies might be seen as inconsistent with the desire for increased efficiency that comes with free trade. Provisions would have to exist in a free trade agreement to deal with these problems. However, to the extent that free trade brought gains to the rest of the country, further migration from the Atlantic region would be encouraged. Earl saw this as a desirable development.

The effects of free trade on central Canada were discussed by Rodrigue Tremblay. In view of the substantial adjustments that might be required, especially in Quebec, Tremblay stressed the importance of adjustment assistance policies. He felt that economists have tended to be overly optimistic about the size of adjustment costs. He also noted that the adjustment process could be faster if the share of Canadian production done by U.S. subsidiaries were larger. These firms would, for example, have access to their parents' marketing and distribution facilities in the United States. This might put Canadian firms expanding into export markets at a comparative disadvantage, a point also made by Lazar. He saw scope for policies affecting taxation, labour relations and the political environment generally as also desirable, since these are important in affecting the location decisions of firms, and these policies could complement a move to freer trade. Tremblay concluded that a North American trade arrangement would both increase the attractiveness of Canada as an investment location, and likely promote more industrial decentralization in Canada.

Ronald Shearer evaluated the effects of free trade on the Prairie provinces and British Columbia. He suggested that Canadian trade barriers are seen as bearing more heavily on the West than U.S. barriers. Both Shearer and Earl cited the long-standing discontent in both the East and the West with the perceived effects of the National Policy as a point in favour of trade liberalization. For the West, gains would take the form of lower consumer prices and changes in real factor rewards. The real returns to natural resource owners would be expected to rise, thus benefitting provincial governments. Shearer felt that short-run gains of the order of 4 percent of provincial income were possible. He stressed that the long-run gains would depend crucially on the ability of capital and labour to adjust interregionally to changes in their real rates of return. The result of Harris's study, with its significant effects on wage

rates in central Canadian manufacturing might suggest some relative long-run decline in per capita income in the West compared with the level in central Canada.

Shearer also emphasized, that despite free trade rhetoric, western provincial governments have constituencies that benefit from protection. High tariffs exist on plywood and on some agricultural products on a seasonal basis. Export restrictions are in place for raw logs and natural gas. These natural resource and agricultural management and marketing policies are incompatible with free trade. He emphasized that the manner in which these issues are resolved is important and has the potential for arousing opposition from western provincial governments.

Sector-Specific Issues in Canada-U.S. Free Trade

A wide range of sector-specific issues would clearly arise with any Canada-U.S. free trade arrangement. One session of a one-day symposium cannot possibly deal with the full range of these issues, but three sectoral issues were discussed. Carl Beigie considered auto trade issues, Colin Carter reviewed agricultural trade, and Walter Haessel examined trade in energy products.

The Automotive Sector Carl Beigie emphasized how the 1965 Canada-U.S. Automotive Products Agreement has provided a practical demonstration of the net economic gains that are possible with bilateral sectoral free trade. Large efficiency gains resulted through rationalization and integration of the North American industry, and were captured mainly in higher wages. Consumers gained as prices in Canada moved closer to those in the United States.

He warned that future sectoral agreements with the United States will be difficult to negotiate if Canada demands permanent production safeguards, which have proven unpopular in the U.S. Congress. In sharing concern about the future of standardized production in North America, he suggested that there are only two practical long-term options: massive conversion to production that is even more capital intensive or an increased level of protection for the industry on a long-term basis.

The Agricultural Sector⁵ Colin Carter argued that, as far as agricultural trade is concerned, common interests rather than bilateral trade irritants with the U.S. predominate. The failure of the GATT process to deal adequately with protectionism in this sector has allowed countries like Canada and the United States, which enjoy a strong comparative advantage in agricultural production, to capture only a small amount of the potential gains from global free trade that exist in these products.

If it is true that the United States would gain less from a free trade arrangement than Canada, then Canada could provide support to the United States on issues of mutual interest. He suggested that Canada could offer to take part in a joint initiative to negotiate reductions in agricultural NTBs in the EEC or perhaps offer its support in an attempt to have the multilateral agreement on subsidies rewritten so as to better control the use of export subsidies. These efforts, if successful, would benefit both countries.

There are nevertheless bilateral issues of some importance. The United States is Canada's largest single market for agricultural exports and Canada has a keen interest in preserving access to that market. This stability has been shaken recently by complaints from U.S. producers concerning unfair competition as a result of Canadian government subsidies paid to producers under, for example, commodity stabilization programs. If countervailing duties are imposed, there could be very serious consequences for Canadian producers.

Prospects for further liberalization of bilateral trade, as opposed to greater security of access, may well be limited. Greater liberalization in some products would require the harmonization of agricultural policy objectives which, at present, differ in the two countries. Dairy products were one example noted.

While these policies are costly in terms of the higher consumer prices and the trade foregone that result, Carter emphasized that political reasons make them exceedingly difficult to remove. Subsequent discussion produced disagreement about whether these products should be excluded from an agreement.

The Energy Sector Several parts of the National Energy Program were identified by Walter Haessel as having caused annoyance in the United States, which may well complicate negotiations on free trade. One of these is the Petroleum Incentives Program grants, eligibility for which depends upon the level of Canadian ownership and control. Another is the requirement that applicants for exploration and production rights on Canada lands demonstrate that they are using a high level of Canadian goods and services. Moreover, under free trade it might be impossible to maintain a divergence between domestic and world prices.

One of the sectors recently proposed as a candidate for sectoral free trade negotiations is petrochemicals. Haessel, however, could see no reason why the industries on either side of the border would be much interested in this. U.S. producers are firmly protectionist and many elements of the Canadian industry would not be in a favourable position to take advantage of free trade, because they would face higher heating costs for plants and in some cases higher input costs.

On the subject of possibly offering the United States some long-term contracts in energy supplies as an inducement to entering negotiations

on a bilateral arrangement, Haessel pointed out that U.S. security of supply could become our insecurity of demand. The Canadian industry would bear the costs of the capital required for the exporting facilities that would remain constant, although revenues would fluctuate sharply with changes in U.S. demand. Questions were also raised about the ability of governments to negotiate better long-term contracts than they could get from normal private contractual arrangements.

The Form and Functioning of a Free Trade Arrangement

The form that a free trade arrangement with the United States might take was a frequent topic of discussion throughout the day. The consensus was that an arrangement to liberalize Canada-U.S. trade could take one of three forms: a sectoral agreement with free trade restricted to certain products, the creation of a free trade area encompassing almost all trade between the two countries, or a customs union which involves a free trade area with harmonized trade barriers against third countries.

The idea of exploring the possibility of pursuing negotiations with the United States towards a sectoral free trade arrangement was raised in the 1983 Department of External Affairs document "Canadian Trade Policy for the 1980s" and was also discussed by Robert Johnstone of the Department of External Affairs in a luncheon speech. A sectoral approach has some advantages. It restricts risk to certain sectors. It is likely to be technically easier to negotiate, and the approach may give Canada information on the likely American position in broader negotiations. It could also be argued that, since a substantial amount of Canadian trade with the United States will be essentially duty-free by the end of the Tokyo Round cuts, future negotiations could focus on those remaining areas with high tariffs or important NTBs. There may not be much difference in substance then between a negotiation covering a broad range of problem sectors and a general free trade negotiation with certain "sensitive" sectors exempt.

However, sectoral arrangements have some serious drawbacks. They would fail to cover "substantially all the trade" as Article XXIV requires between participants in a free trade area or a customs union. As such, it would require a waiver from the other contracting parties to the GATT for which a two-thirds majority of votes cast would be required. Those who would suffer from trade diversion as the result of a discriminatory arrangement might well be inclined to vote against it. It would not be in the interests of either country to ignore such a decision.

It was also pointed out that, since each country offers its preferred set of sectors for negotiation, these sets are unlikely to intersect significantly. Trade-offs cannot be avoided. Negotiations must inevitably broaden, possibly to the point of discussing general free trade. Further trade disadvantages of sectoral arrangements were mentioned.

- The difficulty of defining a sector may induce greater inequality between the protection afforded different products that are possibly quite similar.
- The scope of intersectoral adjustment allowed by sectoral arrangements will be reduced. Since Canada will be making relatively larger adjustments, it will need additional scope to choose areas of specialization.
- A narrower agreement invites greater pressures on governments from groups lobbying for exemptions. This could result in unduly narrow agreements, with smaller gains than could be achieved with broader agreements.
- Distortions may be increased, for example, in textiles, where the Multi-Fibre Arrangement already restricts trade. Producers might therefore demand lower quotas on imports from third countries if imports from the partner country increased. This sector might also be encouraged by a sectoral agreement to expand unduly in the short term, given that its long-term prospects may be poor.

The customs union, favoured by Eastman, has the advantage of removing customs procedures between the two countries and of helping to eliminate customs-related non-tariff barriers involving administration and valuation. In a free trade area, goods must be accompanied by a certificate of origin. Arbitrary value-added rules are also required to determine whether or not a good can move duty-free from one partner country to the other. In a customs union, this is not a problem, since the tariff structures of the participants are harmonized, thus removing incentives for goods to enter indirectly through the low-tariff country. Eastman stated that the structure of American and Canadian tariffs are already very similar (although Canada's are on average higher) and that quotas were already greatly harmonized. Tax harmonization would not be necessary.

However, it is the requirement of harmonization of trade policy in a customs union that leads to the greater popularity of the free trade area. With the question of safeguarding Canadian political independence so important in many people's minds, the fact that "harmonization" of Canadian and U.S. trade policy is tantamount to having Canada trade policy set in Washington often leads them to favour a free trade area.

A free trade area attempts to offer the maximum benefits in terms of access to a large market with a minimum of policy harmonization. Advocates of a free trade area point to experience elsewhere, such as with EFTA, where certificates of origin have not proved to be a burdensome problem.

It can be argued that the essence of commercial policy is detailed negotiation. While the broader issues determine the philosophical basis for policy, it is the implementation of policy through the terms of an

arrangement which is crucial. Several different elements of detail which would be critical in any Canada-U.S. free trade arrangement were identified.

The first concerned the timing of the implementation of tariff cuts and agreements on non-tariff barriers. One possible route to take with respect to tariff cuts would be to phase them in, perhaps over a ten-year period, with a 10 percent reduction in each year. This corresponds to the phased tariff reductions occurring with the formation of the EEC. This phased approach delays both adjustment costs and the gains from free trade.

Another approach to timing would be to remove all trade barriers at once at some date announced a few years in advance. As adjustment costs would be incurred over a shorter period, adjustment assistance would necessarily have to be more extensive.

Choosing one approach over another is a matter of judgment about the nature of the adjustment process. Harris, who favours the latter method, sees firms as having to acquire new capital goods and train workers in new skills in order to adjust their product lines to meet new competition or enter the U.S. market. The investment involved is not at the margin and it is important to provide a focal point around which all investment decisions can be made. He suggested in his paper that "the immediate and total removal of all bilateral trade barriers would mitigate the inevitable lobbying of different industry groups pleading for a slower rate of adjustment in their industry than others."

It was widely agreed that non-tariff barriers raise more difficult problems. First, they must be defined; then ways must be found for reducing them. From an American point of view, issues have already arisen with Canada's Foreign Investment Review Agency⁶ and the NEP. Regional development assistance policies would likely also be criticized since these are often viewed as a form of export subsidization. The pricing policies of provincial liquor commissions, provincial government procurement policies, agricultural subsidies and restrictions imposed by marketing boards might well be added to the list.

These are all examples of the basic fact that NTBs are seen as a trade-distorting measure to the foreign country, while they are often seen as an integral part of the home country's domestic policy and not part of its trade policy. Having to reach agreements on these in negotiations with a foreign country could be perceived as an infringement of Canadian political independence. This is especially true of regional development assistance. An agreement here would have to outline ways for determining which part of assistance to an industry was merely compensation for a disadvantageous location, and which was a real subsidy that might then distort trade flows.

One of the U.S. non-tariff barriers which might concern Canada would be the Foreign Sales Corporation (formerly the Domestic Interna-

tional Sales Corporation), a means by which corporations in the United States making a certain fraction of their sales abroad receive a tax break. This is in fact a tax subsidy. Other important NTBs are procurement policies, restrictions on urban transportation equipment, and some aspects of customs valuation. The question of state and provincial procurement policies raises the issue of how the federal nature of each country affects the extent of trade liberalization that can take place. As Wilkinson pointed out, there is a lot of potential here for increased intergovernmental conflict if the national governments attempt to impose restrictions on subnational bodies. "Buy provincial" policies reflect problems with the internal economic union which may need to be solved before the foreign trade aspects of these issues can be adequately dealt with.

Thus some deal would have to be struck on the definition of major NTBs and on rules to restrict or eliminate them. Such an agreement could either try to lay out general principles or it could attempt to spell out in detail just what would and would not be allowed. It would have to cover not only existing policies, but also ones that do not now exist but could be adopted in the future. Industrial policies to foster growth of high-technology industry might be one example.

Another issue raised was whether a free trade arrangement would be closed (limited to Canada and the United States) or open-ended (other countries permitted to join). The open-ended option may appear more liberal, but the effects on Canada of participation by third countries such as Mexico appear not to have been studied; these remain a question for future research.

Whatever the outcome, any agreement would have to be supervised and some dispute settlement procedure set up. The most common suggestion made was some form of joint Canada-U.S. commission to oversee all aspects of any free trade agreement. Ideally it would be a depoliticized body that could make either binding or (more likely) non-binding but strongly influential recommendations to the national governments.

A final question concerned the treatment of abrogation of any arrangement jointly entered into by the United States and Canada. One option might be to exclude unilateral abrogation altogether, and only allow dissolution of the agreement by mutual consent. As no supranational enforcement mechanism exists, however, it is hard to see how one can effectively exclude the possibility of unilateral action.

If unilateral abrogation is allowed, the agreement would require a set of arrangements under which there would be a cost of abrogation imposed on both parties. Under the GATT, non-compliance is accommodated through the ability of trading partners to withdraw concessions entered into. Thus, under this approach, if the United States were to withdraw from part of an agreement, Canada could also withdraw. The

problem with this is that, since most of the economic benefits of a free trade arrangement would accrue to Canada, so too would most of the costs of abrogation. Thus some further set of arrangements would need to be explored to try to better equalize these costs. One possibility might be that any agreement could specify Canada's right to raise withholding tax rates on dividends and interest paid abroad in the event of abrogation, currently limited under the Canada-U.S. Double Taxation Treaty, to rates which were higher than those which applied in the United States on Canadian-held assets.

The consensus was that there is clearly a wide range of difficult and complex issues to be dealt with in any free trade negotiations with the United States, but that with sufficient political will these were superable. The larger issue was whether in principle each of the parties was convinced of the virtues of some form of free trade arrangement.

American Views on a Free Trade Arrangement

Although most of the symposium dealt with Canadian issues, the question of the nature of the U.S. response was clearly of great importance. While these considerations were raised from time to time throughout the day, the concluding session was set aside to deal with them more fully.

In his remarks to this session, William Diebold offered an American viewpoint. While it could legitimately be asked whether this apparent renewal in Canada-U.S. free trade was just the recurrence of an historical pattern, Diebold saw reasons for it in current circumstances. Continuing structural problems in the Canadian economy, concern with growing nationalism in American economic policy and its potential effects on Canada, as well as the deterioration of multilateral trading arrangements are likely causes of renewed Canadian interest.

For many reasons, Canada must initiate the discussions. These would inevitably deal with more than "free trade." Diebold stated that a wide range of bilateral economic relations would inevitably be drawn into the negotiations. These might include the domestic policy aspects of non-tariff barriers, trade-related investment issues, industrial policies and industrial strategies generally.

The consequences of bilateral free trade have not been studied in the United States to nearly the same degree as in Canada. As most of the gains and adjustment costs would occur in Canada, it is not surprising that public interest in the United States has not been as great as in Canada. The United States has still to develop its position on the issue.

Diebold saw the U.S. administration as taking seriously the recent tentative Canadian steps toward talks about sectoral free trade. If negotiations begin, he urged that the real issues be dealt with at the outset and that both sides be frank about what they would find unacceptable.

Finally, Diebold considered possible future directions of U.S. trade policy in general. If the United States takes a nationalistic and mercantilistic course, Canada could be left in a difficult situation. If the United States pursues efforts to strengthen multilateral cooperation, the Canadian-American question could still be relevant. Bilateral problems also exist on a global basis. He suggested that bilateral agreements that might be advantageous for both countries could also provide a useful example for future multilateral negotiations.

Other Trade Policy Options

While there are arguments both for and against Canada's pursuit of a free trade arrangement with the United States, Canada's other trade policy options might also be questioned. Many years ago, the British Empire and the Commonwealth were seen as the alternative to a strong link with the United States but with the end of the Empire and the demise of the Commonwealth as a major economic force, this alternative no longer exists.

The second alternative to an arrangement with the United States is the commitment to the GATT. However, it can be argued that the GATT may already have yielded most of the gains that are realizable. The GATT may be viewed as an increasingly cumbersome institution involving an ever-growing number of countries that have great difficulties keeping trade liberalization on track, as manifested by current predicaments as to how to deal with quantitative restrictions.

The issue, therefore, is where else does Canada go to pursue export markets and develop trade links? To some extent, these alternative options were explored in the 1970s through the "Third Option" with Europe, which in hindsight is widely agreed to have been less than successful. No major increase in our export share to Europe was achieved through this policy.

Another alternative is to more actively seek out markets in the developing world, and particularly the rim of the Pacific basin, where growth performance has been so strong over the last 10 to 15 years. While there are undoubtedly opportunities for Canada in these areas, these countries still account for only a relatively small share of Canadian exports.

The final option is to withdraw increasingly from international trade and emphasize our own internal markets. The arguments against this, of course, are the relatively small size of the domestic market and the loss of potential gains from international trade.

In light of all of this, Canada-U.S. trade policy options must be evaluated, not only in terms of their own intrinsic worth but also relative to the alternatives that exist. This was the theme developed in the review of the trade policy recently produced by the Department of External Affairs. This document is remarkable, compared with other trade policy

documents produced in Canada over the years, in suggesting consideration of a Canada-U.S. free trade arrangement, albeit limited to a sector-by-sector approach. Since Canada would propose for inclusion in the negotiations those sectors in which it could expect maximum gain, any such set of proposals seems likely to be broadened if it is to be favourably received on both sides of the border. It may be the case that we are already headed down the Canada-U.S. free trade route because of the initial bargaining position taken in this Review and the subsequent reactions in the United States. If so, the proceedings of the symposium gain added significance through their contribution to debate in Canada on these issues.

Notes

We are grateful to Carl Beigie, Colin Carter, William Diebold, Gerry Helleiner, Ed Safarian and Bruce Wilkinson for helpful comments on an earlier draft of this paper.

1. Details of this work are provided in J. Baldwin and P. Gorecki, "The Relationship between Trade and Tariff Patterns and the Efficiency of the Canadian Manufacturing Sector in the 1970s," in this volume.
2. This work is described in R.G. Harris, "Summary of a Project on the General Equilibrium Evaluation of Canadian Trade Policy," in this volume.
3. This issue is dealt with in more detail in James R. Melvin, "The Regional Impact of Tariffs," in this volume.
4. Some of this work is summarized in Appendix C of the Introduction to this volume.
5. For further discussion of these issues, see T. Warley, "Issues in Canadian Agricultural Policy," in this volume.
6. The United States, for instance, has made a successful appeal to a GATT panel, protesting FIRA provisions that violate the principle of national treatment.

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Appendix

List of Participants

RESEARCH SYMPOSIUM ON A POSSIBLE CANADA-U.S. FREE TRADE ARRANGEMENT HELD BY THE ROYAL COMMISSION ON THE ECONOMIC UNION AND DEVELOPMENT PROSPECTS FOR CANADA

Ottawa, October 6, 1983

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Peter Dobell	Parliamentary Centre for Foreign Affairs and Foreign Trade, Ottawa
John Earl	University of New Brunswick, Fredericton
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Harry Eastman	University of Toronto, Toronto
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Potential Economic Effects of a Canada-U.S. Free Trade Agreement

R.J. WONNACOTT

The largest trade flow that has ever taken place between two countries is the one now occurring across the Canada-U.S. border. The tariffs impeding this trade have been coming down as a result of multilateral negotiations within the General Agreement on Tariffs and Trade (GATT) — in particular the Tokyo Round of tariff cuts that is now underway. But Canada and the United States have taken no bilateral action to eliminate tariffs against each other even though there have been a number of similar regional initiatives, the most prominent example being the European Economic Community.

This paper examines the economic benefits and costs of Canada-U.S. free trade to both countries; suggests the possible provisions of such an agreement; and discusses the technical and political hurdles that might be encountered. Three important points should be noted before proceeding.

- Free trade would involve an attack not only on tariffs but also on the growing list of non-tariff barriers (NTBs), which include quotas and government procurement policies such as Buy American. Indeed one of the advantages of bilateral negotiations between Canada and the United States, compared to multilateral negotiations in the GATT, is that they would allow us to focus our negotiating efforts on the U.S. NTBs that damage Canada most.
- Trade barriers cannot be eliminated altogether. Tariffs can be completely eliminated, but not NTBs. Complete free trade does not exist even between states in the United States or between provinces in Canada. For example, provinces have procurement policies that favour their provincial producers. Nonetheless, states and provinces derive substantial benefits from the relatively high degree of free trade that they now enjoy.

- Even though the Tokyo Round is substantially reducing tariffs, it will not come nearly as close to eliminating them on our trade with the United States as it is now fashionable to believe. True, by the end of the Tokyo tariff cuts in 1987, a large percentage of our exports to the United States will be duty free. But this is because so many of these goods, such as resources and autos, already flow through duty-free holes in the U.S. tariff wall. A long list of manufacturing activities in Canada will still be deterred from exporting by remaining U.S. tariffs. To be internationally competitive, these activities require specialized, large-volume plants in Canada which can be justified only if there is assurance of continued access to the U.S. market. A treaty-bound zero U.S. tariff under a free trade agreement would provide much more assurance on this score than a remaining non-zero tariff, even if it is small.

Canada-U.S. Free Trade: The Canadian View

In manufactured goods in which there are economies of scale and other advantages of a large market, it is not clear how Canadian industrialists, with a domestic market of about 25 million people, can compete with producers in Japan, the United States or Europe who have access to tariff-free markets of more than 100 million. Accordingly, Canadians have supported multilateral trade liberalization in the GATT. The Kennedy and Tokyo Rounds have reduced the disadvantage Canadian producers face by providing easier access to foreign markets. At the same time, Canadian consumers have benefitted from easier, cheaper access to foreign goods. This is the key argument for a further step — a Canada-U.S. free trade agreement.¹ By allowing goods to flow freely between the two countries, an agreement would provide Canadian producers and consumers with the benefits of a “domestic” Canada-U.S. market of more than 200 million people.

In evaluating the effects of bilateral free trade on Canada in a more detailed way, it is important to distinguish between the effects of removing our own trade barriers against U.S. goods and the effects of removing U.S. trade barriers against our goods.

The Effects of Removing Canadian Trade Barriers The removal of Canadian trade barriers would reduce the price within Canada of imports from the United States (and of import-competing goods). The quantity of imports would increase for two reasons, both beneficial to Canada. (a) Canadians would benefit from being able to increase their consumption of bargain-priced imports (and import-competing goods). (b) To some degree, imports would displace higher cost Canadian production. The benefits stem from the fact that these imports are goods

which can be produced at lower cost in the United States. Technically speaking, we would be giving up activities in which we have a comparative disadvantage.

The Effects of Removing U.S. Trade Barriers At present, many Canadian industrial exports pay a tariff at the border which goes to the U.S. treasury. With the elimination of this tariff, Canadian exporters would no longer pay this “tax” to Washington. These funds would be transferred back from the U.S. treasury to Canadian exporters and eventually to Canadian labour and other factors of production.²

In addition to this effect on existing Canadian exports, the removal of U.S. trade barriers would also provide a much more important benefit to Canada — the opportunity for Canadian firms to increase their exports to the United States. The increased volume of Canadian output in specialized export lines where there are economies of scale would reduce manufacturing costs. This in turn would raise Canadian real income.

The Combined Effects With the elimination of trade barriers between the two countries, Canadian producers would rationalize. That is, they would specialize in a smaller range of goods, producing each at higher volume and frequently at lower cost. In doing so, Canadian producers would be responding to both a carrot and a stick. The carrot would be free access to the large U.S. market. The stick would be the removal of the Canadian tariff, which would leave many Canadian firms unable to compete with less expensive imports unless they did rationalize and thus reduce their costs. The reductions in Canadian costs through increased productivity would allow Canadian producers to increase their wages and/or reduce their prices. (Indeed, inexpensive imports would force them to reduce their prices.) Thus, because of a combination of lower prices and increased wages, Canadian real income would rise.³ Estimates of these and other Canadian income gains resulting from bilateral removal of Canada-U.S. tariffs are very large — in the range of 5 to 10 percent of Canadian GNP. Employment in Canada would fall somewhat as imports displaced some domestic production, but there would be an offsetting tendency for employment to rise because our exports to the United States would increase as U.S. trade barriers came down.

With the increase in our income, would the activities in which we engage change drastically? Specifically, would Canadians become “hewers of wood and drawers of water”?

It is true that removal of only our own tariff would move Canada in this direction, at least to some degree. The reason is that the Canadian tariff (like those of other countries) is escalated. That is, it is very low or zero on resources but rises as goods become more and more highly processed. Thus, it provides heaviest protection to manufactured goods,

and if only this tariff were removed, Canadian manufacturing would be likely to contract. While it is not clear that the resulting redirection of Canadian activity toward resource processing would be as damaging as Canadians sometimes assume (many oil-exporting countries have discovered that “drawing water” at \$20 to \$40 a barrel can be extremely rewarding), almost no one suggests a policy of removing only the Canadian tariff. Instead the issue is removing both the Canadian and U.S. tariffs. This means getting rid of a U.S. tariff that is also escalated and that has consequently deterred Canadian export and production of highly processed goods. Because there is a high tariff on these goods at the U.S. border, we have tended to concentrate more heavily on exporting duty-free resources.

In short, the Canadian tariff encourages us to concentrate more heavily on highly processed goods while the U.S. tariff pushes us in the other direction, toward concentrating on resources. If both tariffs — with their largely offsetting effects — were removed, it’s not clear that we would move strongly in one direction or the other. Empirical studies of this issue imply that Canada is likely to move toward an increased, rather than a decreased, level of manufacturing. One reason is that the existing Canadian industrial corridor between Windsor and Quebec City is a reasonably good location to produce highly processed goods for Canada-U.S. distribution — provided trade is completely free across the border. This Canadian corridor lies along the northern edge of the largest market in North America, the Chicago/Boston/Baltimore triangle. Toronto is a considerably better location to produce for this market than the “out-of-the-way” Minneapolis-St. Paul area, which despite its distance has been able to attract and retain considerable industry in free trade competition with other U.S. locations.

Canada-U.S. Free Trade: The U.S. View

Costs to the United States The removal of tariffs on Canadian goods at the U.S. border would be a clear benefit to Canada, as earlier recognized. This benefit to the relatively small Canadian economy would be far more important than the corresponding loss to the much larger U.S. economy of tariff income to the U.S. Treasury⁴. It should be noted that a similar duty loss has been borne by the United States as a result of the Auto Pact, but even though this pact has become a sensitive issue, with each country expressing a number of complaints, the United States has not complained about its loss of duty revenue. There is no evidence that this loss is considered important or that Americans have even noticed it, and it is obviously not in the Canadian interest to dramatize this point.

Benefits to the United States While there have been a number of friendly overtures, there has been no serious recent attempt by either Congress or the U.S. administration to promote the idea of Canada-U.S. free trade. This reflects the correct perception by Americans that such a U.S. initiative would kill the idea politically in Canada. It does not mean that bilateral free trade would bring no benefits for the United States.

An expanded market — Removal of Canadian trade barriers against U.S. goods would expand U.S. markets, providing gains to U.S. producers able to exploit comparative advantage and economies of scale. But free access to Canada would expand the market available to U.S. firms by less than 10 percent. Would this generate significant benefits?

To get some idea of why the answer would be “yes” for many U.S. firms, suppose that the 5 to 10 percent of the U.S. market that lies northwest of a line running from, say, Minneapolis-St. Paul to northern California were to be cut off from the rest of the United States by exactly the same trade barriers that now exist between Canada and the United States. Even though this area is only 5 to 10 percent of the U.S. market, its loss would be important for many firms in the rest of the United States and crucial to some — especially those that are just at or below their breakeven point before taking into account their sales in this slice of the market. We can assume that many producers in the rest of the United States would react strongly were they forced to bear the cost of such a reduction in their market. Yet their costs would be roughly the same as the benefit they would acquire from the free access to the Canadian market that they would achieve under Canada-U.S. free trade. In both cases, we are talking about the potentially large change in the profit position of U.S. firms that could result from a geographically dispersed 5 to 10 percent change in their market.

Such a potential benefit to U.S. firms could exist even if their costs of production were constant. In areas of manufacturing where there are economies of scale, increased sales volume would mean lower costs on all their units of output, and consequently even greater potential benefits.⁵

The advantage to U.S. firms of exporting to Canada rather than servicing our market with branch plants — Historically, the Canadian tariff has reduced the incentive of U.S. firms to export to Canada and increased their incentive to service the Canadian market by investing in Canadian branch plants instead. Accordingly, removal of the tariff will, in the long run, induce U.S. firms to export more and invest in Canada less. Given the recent uncertainty about the future climate for foreign investment in Canada, U.S. firms may prefer this export option on both political and

economic grounds. Canadians would find it more difficult to take action against treaty-guaranteed U.S. exports to Canada than against U.S. investment in Canada which is protected only by non-binding OECD guidelines.

Securing existing U.S. trade and investment in Canada — An approach by Canada to setting up a free trade area would leave the United States with the choice of saying yes or no. But whereas a “yes” would draw the two countries together, a “no” would be likely to push them apart. If the Canadian approach occurs because U.S. protection has increased and Canada feels it must move either toward greater cooperation with the United States or toward more protection, then a U.S. refusal would guarantee a Canadian move in a protective, nationalistic direction.

Thus there are two broad economic reasons for the United States to respond favourably to a Canadian initiative. The first is that it would provide benefits. The second is that it would protect the United States from the losses on its Canadian exports and investments that are likely if a rebuffed Canada embarks on a more nationalistic set of policies.

While the picture is one of net economic gains for the United States, the gains would not necessarily be large — especially if measured as a percentage of the huge U.S. GNP. But so long as the economic effects are positive — no matter how small — this should be more than enough to gain U.S. support, given the past U.S. record of accommodating the wishes of its partners. For example, the United States supported the formation of the European Economic Community even though this policy — and in particular the highly protective Common Agricultural Policy — involved substantial U.S. costs.⁶ American support in this and other cases has been forthcoming for political reasons — and there is no a priori reason to expect that similar support for a Canada-U.S. free trade area would be withheld.

Political Advantages While U.S. support for the EEC was tempered by the possibility that it might make Europe more protectionist, there is no such problem in the proposal considered here. Canada-U.S. free trade would, by its very nature, make Canada a less protectionist partner. Given the number of hostile relationships that the United States already has to deal with, a strong political case can be made for a policy of accommodating a key partner to increase the chance of future cooperation and reduce the chance of conflict.

But the incentive for the United States may be more than just the defence of an existing relationship. It is possible that the two countries might view a Canada-U.S. free trade area as a focus for a broad new initiative to “get North America moving again.” The task of revitalizing Canada-U.S. industry would be encouraged by an important (and para-

doxically protective) side effect of a free trade area: industry in each country gets protection from third-country competition in the market of the other country. Canadian producers selling in the United States would get duty-free access that their competitors in, say, Germany or Japan would not enjoy and U.S. producers would get similar preference in the Canadian market. Because tariffs are escalated — i.e., higher on industrial products than on primary products — this “market trading” effect is stronger in highly processed industrial goods than in primary products.

Thus, there is a reasonable expectation of a favourable U.S. response to a Canadian initiative. But there is, of course, no guarantee. Negotiations we enter into are never assured of success. The normal procedure is for a country to decide what is in its interest and then attempt to negotiate it.

What Form Should Free Trade Take?

Should Canada and the United States opt for a free trade area, a customs union or a common market? All three methods allow participating countries to remove the trade barriers between them in a way that is consistent with the GATT (in particular, Article XXIV, which sets out the requirements of a free trade area). It is very much in Canada’s interest to conform fully to GATT regulations — an issue we will return to later — since the GATT now provides a small country’s bottom line of defence against restrictive measures imposed by a large country. Indeed, a Canada-U.S. free trade area should be designed not only to be consistent with the GATT and avoid weakening it,⁷ but if possible also to strengthen it. In this regard, it should be kept less, rather than more, protectionist vis-à-vis the rest of the world, and it should be kept open to possible participation by other countries in the future. Moreover, serious consideration should be given to extending it to include services — an area of apparent mutual benefit and current U.S. concern. By broadening coverage into the wide area of service activities not included in any previous free trade treaties, a Canada-U.S. free trade area might be viewed as a vehicle for providing continued momentum toward liberalized world trade during the present period of disappointing GATT progress.

What form would best satisfy all these objectives?

A Customs Union In a customs union, Canada and the United States would have to agree to a single common external tariff on imports from third countries. Because of its relative size, Canada could scarcely hope for equal influence in establishing this tariff. Hence commercial policy would be made, by and large, in Washington. Quite apart from the concerns such a situation would cause in Canada, a common commer-

cial policy would create problems because of the prerogatives of the Congress in setting U.S. trade policy. Finally, a customs union would not allow Canada to reduce protection against third countries without getting the United States to agree to do the same. For these reasons, a customs union is not considered further.

A Free Trade Area This is the form recommended for Canada and the United States. Each country would have a greater degree of independence than in a customs union. It would be free to set its tariff independently against third countries. Thus, the heavy influence of the United States in setting trade policy vis-à-vis third countries would be removed. Since each member would be allowed to reduce its tariffs against third countries, a free trade area would tend to be less protectionist. It is also more open-ended and easier to expand to include new countries, because it requires no negotiation of a new external tariff or, alternatively, no restriction on new participants to conform to an existing common tariff.

A Common Market In common usage, this term means almost anything. It is often used to describe a free trade area or customs union. But its most precise definition is “what the Europeans are now doing,” which is a customs union with special attempts to coordinate policies between the member countries. Such a form would be unsatisfactory not only because it is a customs union with a common external tariff against third countries, but also because it involves the deliberate attempt to coordinate other policies as well. Any such coordination beyond the bare minimum required, as noted in the next section, would likely be politically objectionable to Canada and in any case would not be required to achieve most or all of the economic benefits from free trade.

In looking at these three options, two points should be emphasized: First, a free trade area does *not* imply a common labour pool or, for that matter, any other form of economic agreement such as a common currency. At least during the period of adjustment, a flexible exchange rate would be preferred to the fixed exchange rate under a common currency. Second, undertaking any one of these forms of economic union does not automatically launch a country into an irreversible and irresistible escalation, with the eventual result of complete economic and political union. Indeed, free trade areas in the past have not led to political union. Economics is not the controlling force in the political sphere that is often supposed. In this regard, the century-old prediction of Friedrich Engels — well known in other contexts as an early proponent of economic determinism — might be noted:

Here [in Canada] one sees how necessary the feverish speculative spirit of the Americans is for the rapid development of a new country . . . ; in ten years

this sleepy Canada will be ripe for annexation. . . . And they may tug and resist as much as they like; the economic necessity of an infusion of Yankee blood will have its way and abolish this ridiculous boundary line.⁸

But the boundary line is still there, and so are the customs houses.

Political and Technical Problems

Even if one selects a free trade area — the form minimizing political and negotiating complications — political concerns will nonetheless arise.

Canadian Vulnerability A Canada-U.S. free trade area would be a much more irreversible option for Canada than for the United States.⁹ The relative sizes of the two countries lead to this conclusion. In a fully rationalized Canada-U.S. economy, firms in the United States would have very limited dependence on the Canadian market since less than ten percent of the Canada-U.S. market is in Canada, but firms in Canada would be heavily dependent on the U.S. market. Accordingly, while the reintroduction of trade restrictions in such circumstances might do considerable damage to the United States, it would involve a much heavier cost for Canada. Thus, a U.S. threat of terminating the agreement¹⁰ would be a powerful bargaining lever that might conceivably be exercised to influence Canadian policy in quite unrelated non-economic areas.

This problem must be kept in perspective. It is not new; it is the traditional Canadian problem that arises because our already high degree of dependence on the U.S. market would increase. But is there much chance that the United States would terminate such an agreement? Such an action seems very unlikely because the United States could be severely hurt by a Canadian response, such as a threat to impose a large across-the-board increase in the tax on U.S. investment in Canada. While each country has, from time to time, engaged in policies that have damaged the other, neither wants anything approaching outright economic war because both recognize that this would involve an extremely high economic cost to both countries.

Having said all this, it still remains true that no matter what we do, we cannot *guarantee* against new U.S. trade restrictions; moreover, once we have adjusted to a free trade area, these would be much more costly for Canada. On the other hand, a free trade area would make such restrictions less likely. The United States could not impose them against Canada without terminating the free trade treaty. Furthermore, a free trade treaty would provide Canada with an exemption from U.S. trade restrictions aimed at third countries — not only Europe and Japan, but also the industrializing countries of Southeast Asia whose exports have been growing so rapidly. In the past the United States has provided such exemption for freely traded goods. An example occurred when balance

of payments pressure led the United States to increase its tariffs in 1971. Although this action was aimed at third countries, it still fell on many Canadian exports — but not on autos, because they were being freely traded under the Canada/U.S. Auto Pact. In any free trade negotiation, Canada should seek to “embed such an exemption in cement.” In short, a free trade area would increase the cost to Canada of U.S. trade restrictions but would reduce the risk that they might be imposed. So we would become more vulnerable to a change in U.S. trade policy in one respect, but less vulnerable in another.

Would the United States Seek to Link Foreign Investment Policy to Trade Negotiations? In my view, the appropriate Canadian response to any such U.S. attempt is clear. We should decide, with ample benefit of hindsight, which parts of our policies that now restrict foreign investment — in particular, which provisions of the Foreign Investment Review Agency and the National Energy Program — are not in Canada’s long-run economic interest. We should then make a necessity of virtue by allowing the United States, in the course of tough negotiations, to “force us” to give up these provisions. Thus we would kill two birds with one stone: such “concessions” would increase our bargaining power in gaining free access to the U.S. market *and* get rid of our own economically costly restrictions on foreign investment that, for political reasons, we may have great difficulty in getting rid of otherwise. (There is an analogy to tariff bargaining here — where one country bargains down the other’s tariffs by giving up its own costly tariffs that, for political reasons, it can’t get rid of otherwise.)

Third Country Objections The most serious objection to Canada-U.S. free trade would be likely to come from Europe. But it’s not clear how the Europeans, with their own more protectionist common market, could credibly object. Moreover, in some European quarters there is a feeling of surprise that, in a world of increasing regional free trade arrangements, one of the most obvious of all — between Canada and the United States — has not been undertaken.

Nonetheless, it would still be wise to pre-empt European objection by making the Canada-U.S. free trade area open-ended to allow full European participation. There is essentially no chance that the Europeans would wish to take up this invitation, but in the unlikely event that they were to consider it, the free trade between North America and Europe that could result would remove the last major barrier to full multilateral free trade. In such an unlikely set of circumstances, the original Canadian-U.S. initiative would result in extremely large and unforeseen benefits worldwide.

Employment Risks Trade liberalization is like technological change. The whole point is to increase efficiency and income, *not* employment. Yet if the past is any guide, one of the major hurdles in negotiating a free trade agreement will be the concern of Congress and the Canadian government about its employment effects.

Indeed, this concern on the Canadian side has led to the proposal in some quarters of rationalizing (scaling up) Canadian production first and then moving to free trade, rather than doing both simultaneously by establishing a free trade area. While theoretically the two approaches could lead to the same result, there are several problems with the policy of scaling up Canadian production first. (a) Since rationalizing would not be forced by foreign competition, there is a substantial risk that it either would not be accomplished or would not be undertaken in the right set of activities. (b) Canadians would be undertaking rationalization costs without simultaneously enjoying the benefits of removal of U.S. trade restrictions. In particular, scaling up production in Canada would involve a number of serious problems unless Canadian producers could simultaneously get access to a much larger market. Attempting to rationalize in the Canadian market alone by specializing in one or a very few models of each good would not necessarily bring benefits to Canadians. It would mean lower cost goods but we would be sacrificing variety. The only way to ensure benefit from high volume specialization is to increase our exports of these specialized items and use the proceeds to pay for the imports that would provide variety. In short, full benefits to Canada from scaling up cannot be realized without increased exports, that is, without freer access to large foreign markets. Free trade with the United States gives us that; any purely domestic policy of rationalization does not.

Thus, there appears to be no way of acquiring the benefits of a large market without actually getting into it, as we would in a Canada-U.S. free trade area. But this still leaves a key question. The adjustment period in moving to Canada-U.S. free trade would involve unemployment risks and other short-run dislocation costs. How can these be minimized?

Measures to Reduce Adjustment Costs

Precedents — such as the European Free Trade Area and the EEC, along with the Kennedy and Tokyo Rounds — suggest that dislocation costs from reducing trade barriers may be less than expected and can be covered without undue pain. However, it would be wise to take special precautions, especially on the Canadian side of the border where most of the adjustment to Canada-U.S. free trade would occur.

Phased-in Tariff Cuts A Canadian tariff of, say, 10 percent could be cut by one percent per year, so that it would disappear at the end of a ten-year period. At the same time, the generally lower U.S. tariff (of, say, 5 percent) could also be cut by this same one percent per year, so that it would disappear in five years.¹¹ Many U.S. nuisance tariffs would disappear even more quickly. Thus, in recognition of the greater burden of adjustment in Canada, years five to ten in the tariff-cutting period would provide Canada with a “window of opportunity” during which our producers would have free entry into the United States while still retaining some protection in the Canadian market. Such relatively modest phased-in cuts of roughly one percent per year may be little noticed in a world of gyrating exchange rates. But in addition, flexible timing could make the tariff cuts even less visible.

Flexible Timing The scheduled Canadian tariff cut for any specific year of, say, one percent could be introduced at the time during that year when the flexible Canadian dollar has decreased in value. In this way the buffering effect of the exchange rate on Canadian industry could be fully exploited. (Of course, pressure from tariff cuts would be brought to bear on Canadian industry, but only with a “bounce-back” in the Canadian dollar.) This timing of tariff cuts would reduce any inflationary pressure generated by the decreased value of the Canadian dollar.

Initiating Tariff Cuts in 1987 An economic case can be made for initiating Canada-U.S. tariff cuts as soon as possible. The longer we delay, the longer Canadian industry — and especially those firms that have already expanded to service the U.S. market — will be encumbered directly by the U.S. tariff and indirectly by the Canadian tariff. The Canadian tariff schedule has a complicated effect on any specific Canadian industry. Although the industry’s *own* tariff protects its output, this is partly offset by tariffs on its inputs which raise its costs.

However, no matter how quickly we move now, it is difficult to see how a free trade agreement could be negotiated and initiated much before the current Tokyo Round of tariff cuts is completed in 1987. Moreover, this timing is consistent with the two countries invoking the “interim agreement” rather than the “declaratory” procedure¹² under Article XXIV of the GATT. (Under the interim agreement formula, Canada and the United States would submit a plan and schedule to the GATT for the creation of a free trade area to inform other GATT members and allow them to make recommendations. This is the procedure that has been used by other applicants in the past; in no case have formal recommendations been made by excluded countries.)

If tariff cuts were initiated in 1987 and stretched over a ten-year period, Canadian protection would not be removed until late in the 1990s. Accordingly the major problem for Canadians would not be losses on

existing assets but getting the next generation of capital investment pointed in the right direction.

Aside from getting the timing right, there are two existing institutions that should help to reduce the short-run adjustment costs. The first, already noted, is our flexible exchange rate that should provide some braking mechanism against a rapid influx of imports into Canada and a loss of employment here. Second, U.S. multinationals in Canada may also make the adjustment easier, since they already have the facilities for distributing the newly specialized output of their Canadian plants throughout the United States.

We could also seek additional ways to buffer the Canadian economy from severe adjustment costs.

Import Trigger Points One approach to consider is a variation of the Swedish/EEC free trade triggers to allow Canada or the United States to invoke controls on imports if they exceed an agreed-upon growth rate. Such a brake on imports would prevent a too-rapid displacement of employment in either country.

Employment or Value-Added Guarantees for Canada The more specific a measure is in attempting to protect existing Canadian employment patterns, the greater the administrative difficulties. Many of the problems encountered under the Auto Pact — plus some new ones — would be encountered in any attempt to provide value-added or employment protection in a broader, across-the-board free trade arrangement.

If this approach is taken, any such guarantees should be short-term, with a clearly defined termination date. Otherwise they would tend to block the shift of activity toward our sectors of comparative advantage and could generate severe problems in controlling the wage level. Short-term guarantees are the most we could hope to negotiate in any case (indeed we would probably be lucky even to negotiate these) because of U.S. sensitivity over the guarantees in the Auto Pact and because, unlike import trigger points, such guarantees would be asymmetrical — providing protection to Canada but not to the United States.

Indeed, as a condition for conceding such guarantees, the United States might seek to broaden the agreement to provide itself with some assurance of access to future Canadian resource supplies. For example, the United States might seek the right of first refusal on a substantial quantity of our future resource exports — at the then-prevailing world price. Such an assurance would involve essentially no cost to Canada, since the United States is our probable export market anyway and we would be getting the full world price. The interesting aspect of this diplomatic trade is that the two countries might mutually benefit by reducing each other's risk. Canada would help the United States to reduce its resource risk, while the United States in exchange would help

to reduce Canada's trade liberalization risk by allowing some short-term employment or value-added guarantees.

Adjustment Assistance This can take many forms: government-backed loans, special R&D grants or accelerated depreciation for Canadian firms rationalizing in order to expand into the U.S. market.

How would such measures be financed? One suggestion is that as the Canadian tariff is reduced and prices fall in Canada, the government could capture part of this price reduction with a temporary sales tax that could then be used to subsidize Canadian industry through the adjustment period. In this way, some of the short-run adjustment costs of Canadian industry would be paid for by the Canadian consumers who benefit from the tariff cuts.

Any such subsidies would have to be explicitly recognized as part of the agreement and therefore exempt from countervail (a U.S. tariff that is imposed to offset a foreign subsidy to firms exporting to the United States). No such problem would be involved in subsidies paid to people who have been displaced — such as portable wage subsidies and retraining grants. Such temporary subsidies would be the essential bottom line in any broad program of adjustment assistance.

Competition Policy In order to facilitate the rationalization of Canadian production in response to free trade incentives and pressures, Canada should relax its restrictions on mergers — insofar as they apply to traded products. (In these products, adequate protection against monopoly abuse would be provided by the competitive pressure of increased imports.)

Other Provisions

Border Controls Since each member of a free trade area sets its own external tariff, third countries have an incentive to get their exports into the free trade area by first shipping them to the member country with the lower external tariff and then shipping them duty free to the other member country. To prevent such deflections of trade, Canada and the United States would have to establish rules of origin, stipulating that imports from the other country must satisfy requirements of national content in order to qualify for free entry. Customs houses at the Canada-U.S. border would not disappear completely, but only a limited proportion of goods would have to be monitored in this way. No monitoring would be required for goods on which the two countries have roughly the same external tariff, goods on which the other country has a higher tariff, or goods with transport costs sufficient to eliminate any incentive to deflect trade.

A Monitoring Agency An agency to handle disputes and appeals would be essential. (A number of misunderstandings and complaints might have been reduced or avoided had such an agency been established for the Auto Pact.) Canada should seek an agency with equal representation from the two countries, able to make binding decisions on matters of appeal — even though, as in any other binding international agreement, this would involve some sacrifice of autonomy. The problem is that the United States might be less willing to sacrifice some autonomy to such a strong monitoring agency. A more realistic expectation might be for an agency that would make strong but non-binding recommendations to the two governments.

Conclusions

Since much of the short-run risk and adjustment cost from free trade would have to be borne by Canadian manufacturers, they have traditionally been one of the strongest sources of opposition. But there is now evidence that this opinion is shifting. In a 1980 presentation to the Senate Standing Committee on Foreign Affairs, the Canadian Manufacturers' Association reported on a nationwide survey of its member firms on the question: "What would be the net impact on your company of Canada-U.S. free trade?" Roughly one-third of the 1000 responding firms expected to contract, one-third expected no change, and one-third expected to expand. This apparent neutrality of Canadian manufacturers seems to represent a surprising change from two decades earlier when business opposition appeared to far outweigh support. (This questionnaire result was even more remarkable because it did not provide a greater weight to larger companies which, on average, are more heavily in favour of trade liberalization.)

There is good reason to view this response as a strong confirmation of the case for free trade. Manufacturing executives — together, of course, with labour — are the ones who have to face the risks. And if these risks are judged to be offset by expected benefits, then we are left with the essentially undiluted benefits that would go to other sectors of the economy — for example, consumers facing lower prices and resource producers facing lower input costs.

But risks and dislocation costs do remain for Canadian manufacturers as they go through the "cold shower" (the term used by the British to describe their entry into the EEC). It is this free trade combination of likely short-term costs and long-term benefits that has, it seems to me, made each generation of Canadians defer this policy to the next (while perhaps regretting that it was not undertaken by the last). The longer we defer, the more opportunities will be missed. (True, rapid technological advances have made possible entry into certain activities in well-established industries. But there are many industries with economies of scale

that we can break into only when they are being born but not later, when large firms have become established.

To keep the adjustment problem in perspective, we should note that over time we are incurring more and more adjustment costs simply by trying to maintain the status quo. Even if we freeze our tariff policy, which in practical terms means restricting any changes in our tariffs to those agreed upon in the GATT, we will still face an increasing problem of adjusting to the explosive penetration of our market by producers in the Far East. The experience of the European auto industry is instructive; its adjustment has not been just to inter-European free trade, but also to increased competition from the Japanese. If the EEC had recognized in its formation that it would have to adjust to both, it might have viewed the cost as excessive. But it can be argued that precisely this adjustment to inter-European free trade has given the Europeans a more competitive auto industry and made the adjustment to Japanese imports less painful.

An Initiative Now? The basic argument for an initiative now is that it may well be more difficult in the future — especially if we wait for a favourable political climate in Canada. Paradoxically, such a favourable Canadian climate of opinion is most likely to occur if and when there is a strong resurgence of U.S. protectionism that seriously threatens our access to the U.S. market. In such circumstances, the status quo would disappear as an option for Canada and we would have little choice (short of a costly South American style shift to a more protected and isolated economy) but to seek some form of bilateral trading accommodation with the United States. But because of U.S. protection, that would be the worst time to try to negotiate freer trade; it would be even more difficult than it is today to get U.S. agreement on provisions to reduce Canadian adjustment costs.

Notes

This paper was prepared as a background document for the Business Council on National Issues. The views expressed by the author are his own and do not necessarily reflect the position of the Business Council or its members. The paper was presented at the Symposium on a Possible Canada-U.S. Free Trade Arrangement held by the Royal Commission on the Economic Union and Development Prospects for Canada on October 6, 1983 in Ottawa. Revised December 1984. A similar version entitled "Canada-U.S. Free Trade: Problems and Opportunities" was published by the Ontario Economic Council, 1985.

1. For much more information on this proposal, see the Senate Standing Committee on Foreign Affairs' recommendation of a Canada-U.S. free trade area in *Canada/United States Relations, Vol. III: Canada's Trade Relations with the United States* (Ottawa, 1982); and *Looking Outward* (Ottawa, Economic Council of Canada, 1975). In this abbreviated summary of the issues, these sources — along with previous writings by the author — have been heavily drawn upon. [For reservations about a Canada-U.S. free trade area, see B. Wilkinson, "Canada-U.S. Free Trade and Some Options," *Canadian Public Policy* (October, 1982).]

2. Since removal of the U.S. tariff would transfer income from the United States to Canada, why wouldn't removal of the *Canadian* tariff transfer income in the other direction — from Canada to the United States? The reason is that because of the relative size of the two economies, Canada-U.S. prices of industrial goods are typically set in the United States rather than Canada. Canadian importers, who accordingly must take the U.S. price as given, must raise the price of imports, as they come into Canada by the amount of the Canadian tariff. Thus the Canadian tariff collected by Ottawa is paid by Canadian consumers who pay the higher price. In other words, the Canadian tariff transfers income *domestically* — between groups *within* Canada. This is quite different from the U.S. tariff which transfers income *internationally* — from Canada to the United States. To state this technically: in North America, it is the United States rather than Canada that determines the terms of trade in industrial goods between the two countries. Therefore, the terms of trade between the United States and Canada are not affected by a change in the Canadian tariff; but they are affected by a change in the U.S. tariff.
3. The specific way in which the real income gain would manifest itself (i.e., the specific combination of price reductions and wage increases) depends on the degree to which the Canadian dollar is allowed to float.
4. There is another reason why the U.S. treasury would lose duty revenue. Americans would be switching some of their import purchases from a cheaper source, such as Europe or Japan, to Canada. The reason for this "trade diversion" would be the preferential treatment provided to Canadian goods; they would get free access into the U.S. market while imports from other countries would still pay the U.S. tariff. While Canadian goods would be cheaper than, say, Japanese goods *to the U.S. individuals and firms that purchased them*, they would be more expensive to the U.S. nation *as a whole*. The reason is that the U.S. treasury, which previously collected duty revenue on imports from Japan, would now lose that revenue because these goods would be coming in from Canada duty free.

It should be emphasized that this does not apply to *all* new U.S. imports from Canada but only to those which displace cheaper goods available abroad.

There would also be a trade diversion cost to Canada to the degree that we switched our import purchases from less expensive third countries to the United States. However, this is unlikely to be important, because the United States is already the cheapest source of supply for Canada in a wide range of products.
5. Whereas U.S. firms would be expanding in most lines of activity, in some they would be contracting because of new Canadian competition. But the expectation of benefits remains, a point that may be seen most clearly by considering a firm producing ten goods at roughly a breakeven point on each. Suppose, as a result of trade liberalization, that it has to give up one of its breakeven activities while expanding its other nine. On these nine it makes a profit where none existed before.
6. The only way of arguing that the EEC provided net benefits to the United States is to argue that it generated a much more rapid rate of European growth and hence more purchases from the United States than would have occurred otherwise. But this is very speculative territory, since we simply don't know what would have occurred otherwise. For this reason we have not used a parallel argument that the United States would benefit from more rapid Canadian growth in a Canada-U.S. free trade area. Incidentally, there is a stronger argument of this sort in the Canadian than in the European case. Estimates of the static real GNP gains for Canada fall in the range of five to ten percent or more, while estimates for the EEC fall in the range of one percent or less. Part of this low EEC figure was due to limitations in the estimating procedures.
7. As even the more protectionist European Economic Community has shown, the formation of a freely trading region can be consistent with the GATT and thus allow parallel progress in multilateral trade liberalization.
8. A. Trachtenberg, ed., Karl Marx and Friedrich Engels, *Letters to Americans, 1848–1895: A Selection*, trans. by L.E. Mins (New York: International Publications, 1953), p. 204.
9. See, for example, M. Sharp, *Canadian-U.S. Relations: Options for the Future* (Ottawa: Information Canada, 1972).

10. The right of unilateral termination by each country would have to be recognized but strictly limited. For details, see *A Possible Plan for a Canada/U.S. Free Trade Area* (Washington and Montreal: Canadian-American Committee, 1965), p. 52.
11. A Canadian tariff of more than 10 percent (say, 15 percent) could be cut 1½ percent per year; similarly, U.S. tariffs of more than 5 percent could also be cut at a more rapid rate.
12. Under this procedure, the two countries simply declare that a free trade area between them already exists. By 1987 when the Tokyo tariff cuts are complete, it has been conservatively estimated that 80 percent of Canada's exports to the United States will be duty free, as will 65 percent of our imports from the United States. As already noted, in very important respects this is nowhere near free trade, but it is still closer to free trade than other regional groups have been when they formed free trading arrangements in the past without GATT objection. Hence North America could be deemed to qualify under this clause. But the problem with this procedure is that it may well be viewed by other GATT members as "too cute" for such important trading nations to invoke; and these members might accordingly object to Canada-U.S. NTB liberalization, which is not covered by this declaratory GATT procedure. Such NTB liberalization is essential, and *is* covered by the interim agreement formula recommended here.



Reservations Concerning a Free Trade Area Between Canada and the United States

MEL WATKINS

We are in the midst of an economic crisis; that is why the Royal Commission has been appointed. The economic crisis is accompanied by a crisis in economics as a paradigm. This creates confusion, which is not helpful to a commission and a country in need of good economic advice. But times of trouble for a paradigm can also be moments of freedom and creativity for scholars. Orthodox practitioners no longer have a monopoly on truth. Unorthodox or dissenting views may turn out to be no better in practice than orthodox views, but they would be hard put to turn out worse. We await a paradigmatic shift within the discipline of economics relevant to the contemporary crisis. Royal commissions cannot invent the new economics that we need, or even commission it, but they should as a minimum not wholly buy into the old.

These musings are most germane to our topic because nothing is more central to orthodoxy than the case for free trade, based on comparative advantage without impediment from tariffs or other barriers, and for free mobility for capital with no discrimination based on nationality. Theory hardens into ideology; to doubt these tenets is to risk the charge of heresy and expulsion from the paradigm.

Yet there have always been doubters and dissenters. We are all aware of the questioning by Keynes (1933) of the virtues of interdependence; MIT economist Lester Thurow (1983) and the American writer Robert Kuttner (1983) make the same point today.

Beyond that, there have been schools of dissent. Firstly, economic history, as a subset of economics, was created in part as a reaction to the free trade bias of British-centred neoclassical economics with its false claim to universality. Economic historians, then and now, have found no clear correlation between free trade and economic growth, and some

have argued the converse. In the absence of any agreed-upon theory of economic growth within economics, economic historians have as much right to be heard as economists proper.

In Canada, the best description of economic history is given by Innis (1956), using his staples approach. Innis was keenly aware of the ambiguities surrounding the role of the tariff, but he was not in doubt that an economy based on staples was a vulnerable and dependent economy. The thrust of his advice, particularly in his later years, was that Canada should lessen its dependence on the United States. Canada remains a dependent staples economy, and Canadian policy needs to be judged explicitly within that context. This applies particularly to policy toward the United States, including trade policy.

Innis's work slips into the second of the more fundamental schools of dissent, that of political economy. That school doubts the necessity of mutual benefits from free trade and points to cumulative tendencies toward underdevelopment or development and toward persistent disparities. It sees orthodox theory as the ideology of the powerful and dominant, and talks of the imperialism of free trade.

It is evident, then, that unorthodox views with respect to free trade have intellectual legitimacy and should be heeded.

Important practical matters follow from these methodological considerations. Specifically, exaggerated talk about the evils of protectionism should be called to a halt particularly at a time when the U.S. government virtually defines any other country's economic development strategy as protectionist. The present economic crisis was not caused by protectionism; rather, protectionist sentiment is a symptom of the crisis. The real beggar-thy-neighbour policies have been the monetarist policies of governments like the United States, which have been only too frequently lauded by the same orthodox economists who warn about the beggar-thy-neighbour risks of protectionism. If the world economy comes crashing down, it is more likely to result from world debt problems associated with the reckless lending policies of banks than from the desires of ordinary people for some protection.

The crisis has created such insecurity for so many people that it is wholly understandable that protectionist sentiments have surfaced. In the light of harsh economic policies, in a world where capital and technology are highly mobile, workers are properly suspicious that comparative advantage will be defined on the basis of who will work for the lowest wage. It behooves economists and those who seek their advice to demonstrate a commitment to the goals of full employment and rising standards of living. Otherwise, by implying to workers that their desire for some job security is actually the problem, we fall into the trap of blaming the victim.

Possible free trade arrangements with the United States are widely discussed, although no certain case can be made for economic benefits

from free or freer trade. Neoclassical theorizing is not necessarily reliable; other theorizing shows the possibility of economic costs.

There are two aspects of the contemporary North American situation that would seem to increase the likelihood of costs. The first is that the American economy is now waning in terms of its global hegemony and is being grossly mismanaged. Its present prosperity is substantially a tribute to enormous arms-spending or military Keynesianism at the cost of an escalating budget deficit. It is one thing to be tied to an efficient and well-managed economy, another to be tied to a crisis-ridden economy that seems at times resolved to solve its problems without regard to the interests of others. Within that context, Canada's treatment by American authorities in the postwar period has shifted, mostly by unilateral American action, from special status and "exemptionalism," to "Nixonomics" and the end of further exemptions, to "Reaganomics" and Canada as an exemplary client state. The record might be thought to speak for itself in demonstrating the need for Canada to attempt to distance itself more from the United States.

The second apparent reality is the reorganization of the American economy as the locus shifts from the frostbelt to the sunbelt. Canadians should recall the unhappy fate of the Maritime provinces in the last century within Canada as a tariff-free common market. It is evident from the persistence of regional disparities within countries that free trade is not a universal panacea.

If the economic benefits from free trade with the United States are at best uncertain, the political costs are likely to prove intolerable. What is at issue is the relation between economic ties and political ties, and specifically the capacity for independent foreign policy in the face of economic dependence. Economists are intensely interested in the linkages between economic policies but are reluctant to consider other linkages although these other linkages are real and must be faced up to.

A highly relevant case in point is the recent decision by the Canadian government to accede to the U.S. request to permit testing in Canada of the air-launched cruise missile. There is some reason to suspect that Canadian acquiescence was based on the desire of Canadian authorities not to upset the Reagan administration and bring repercussions for Canada on a range of issues, especially economic ones.

It would then follow that at least in the long run (if there is one — the prospects are lessened by the decision to facilitate the escalation of the arms race by testing the cruise), we should decrease rather than increase the extent of Canadian economic integration with the United States in order to have more freedom to pursue independent policies, including an independent nuclear policy, should we wish to do so.

This is the bottom line of my reservations. We should recall that the risk of possible economic damage to Canada was cited, even by former Prime Minister Lester Pearson, as a reason for Canada's complicity in

the 1960s in the war in Vietnam, though that is now regarded as one of the worst blunders in American foreign policy. Whose long-run interest was served by our short-run economic interest?

The moral to this can be found in an observation by Innis (1956), "Whatever hope of continued autonomy Canada may have in the future must depend on her success in withstanding American influence and in assisting the development of a third bloc designed to withstand the pressure of the United States and Russia." Innis hastens to add, "But there is little evidence that she is capable of these herculean efforts and much that she will continue to be regarded as an instrument of the United States." Further steps to integrate the Canadian economy into the American economy will only further complicate an almost hopeless task.

An External Affairs policy statement (1983a, 1983b) tries to lessen apprehensions with respect to free trade with the United States by arguing for sectoral rather than for comprehensive arrangements. The logic of my reservations would stand, however. As well, our experience with sectoral arrangements does not inspire confidence. As Clarkson (1982) argues, "The sectors of Canadian industry that have experienced modified forms of free trade — automobiles, defence production, farm equipment — have not produced economic salvation. They have generated technologically dependent, managerially backward and economically weak industries that provide a cautionary rather than an exemplary experience." One of the conclusions of his excellent study is that "there is little evidence . . . that the United States would want to establish a free trade zone with Canada on any basis other than as resource satellite."

As well, the choice of free trade or protection is no longer at the heart of the issues that face us. We have already moved a long way toward free trade; it is, incidentally, evidently no panacea. A central matter that must be before us in any discussion of free trade with the United States is that of foreign ownership and policies toward multinational corporations. If the tariff facilitated foreign ownership, what would happen with free trade? Would foreign ownership fall, and if it fell what would replace it and what would happen to jobs? Under free trade, would we have to treat foreign capital better so that it would stay? If foreign ownership did not fall but rose instead, what would happen to Canadian dependency and the potential for independent policy? Or could Canada have any policy toward foreign ownership at all, given American tendencies to define such policies as protectionist? In short, would free trade with the United States risk leaving us completely at the mercy of the market, meaning the multinational corporations and the American government? Or as Clarkson puts it, "The price for admission to the American market would be the economic policies needed to put Canadian industry in a position to compete there."

In discussing Canada-U.S. free trade, we need to keep in mind the specific interrelationships between trade patterns, both imports and exports, and foreign ownership in the Canadian content. A Statistics Canada (1981) study shows the high propensity of foreign subsidiaries to import from parent companies, and Williams (1983) documents the long history of export-blocking by parents vis-à-vis subsidiaries. Both of these phenomena operate to inhibit industrialization and decrease employment prospects. Trade policy should centre not on free trade with the United States but on countervailing these tendencies inherent in foreign ownership. Free trade, in and of itself, would presumably only give freer reign to these tendencies and risk further erosion of what is already a weak industrial base. As for sectoral free trade, on the basis of experience to date, it risks entrenching structural deficiencies.

Indeed, the issue is not free trade (versus protection) but managed trade. By managed trade is meant not only trade within a macroeconomic framework of economic policy but detailed microeconomic policies on a commodity or sectoral basis. Much more of this already exists than would ever be suspected from listening to economists preach the virtues of free trade. The trend is toward more of it. The issue is not no management but good management. The problem with Canada-U.S. free trade is precisely that it might push Canada toward no management — that is, disarm our policy instruments, both resource policy and industrial policy, and thereby risk disaster for Canadians.

The need for more and better policy, rather than less, permits broader generalization. It is in the nature of an economic crisis that it compels fundamental restructuring with respect to domestic and external relations and with respect to institutions. In the past, in the crisis of the 1930s, Canada opted for closer integration with the United States via the reciprocal reduction of Canadian and U.S. tariffs. But the preceding crisis of the late nineteenth century led to Canada's adoption of the National Policy as the version of managed trade.

Today, many economists, business persons and politicians talk as if the present crisis will be resolved by less government and more integration into the global economy. They support free trade and assume that this will be followed by creative reorganization on the part of the private sector. This seems to be little more than an assumption. Creative responses are not automatic but require policy and planning — good policy and good planning. The reality around us is not less government and more global integration but more government and more global integration; in effect, governments plan more, and need to plan more, in the face of powerful integrative forces.

Canada needs to plan more without respect to whether or not it enters into free trade arrangements with the United States. The problem is that the particular situation of Canada vis-à-vis the United States with the extraordinary level of economic integration, and the particular thrust of

American policy with its denial of other countries' rights to have policies, creates a powerful presumption that free trade per se would lessen the potential for planning and the prospects for sensible policy. Such sensible policy would seem rather to require that Canada attempt to distance itself somewhat from the United States. That is already sufficiently problematic and there seems no need for Canada actually to take initiatives with respect to trade with the United States that risk making us worse off in many senses.

Notes

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Some Comments on Canada-U.S. Free Trade

B.W. WILKINSON

Arguments put forth for Canada-U.S. free trade sometimes sound like the slogan of McDonald's Restaurants: "We do it all for you." A free trade arrangement, in itself, is advocated as the sure way of

- raising Canadian manufacturing productivity about 25 percent to match U.S. levels, primarily by increasing the length of production runs but also by achieving certain other economies of scale and creating a more competitive environment;
- increasing research and development activity in Canadian industry;
- speeding up the pace and scope of technological diffusion; and
- expanding the degree of processing of Canadian resources prior to export.

Sometimes it is also argued that foreign ownership of Canadian industry will be reduced. Supposedly, the market will produce these results on its own. All that government has to do is negotiate the free trade agreement and then step aside to "let 'er rip."

My reservations about complete trade liberalization with the United States do not concern the direction of the above-claimed benefits but rather their magnitude and the fact that discussions have tended to gloss over the complexity of the process that may bring them about. If we overstate the gains and the ease with which these benefits can be attained, we may be prepared to give up more than we should in the negotiation process. Some caution is therefore warranted in our portrayal of what Canada-U.S. free trade can do for us. My concerns are summarized in the following section, with reference to arguments I have developed at some length in other papers. I then review the 1982 report of the Standing Senate Committee on Foreign Affairs concerning Canada's trade relations with the United States. This report is an example of the

oversimplified view so often presented on free trade matters. Finally, I review a 1983 report on Canadian trade policy by the Department of External Affairs which recommends sectoral free trade negotiations with the United States.

A Summary of Reservations About Across-the-Board Free Trade¹

My first reservation about Canada-U.S. free trade is that 116 years of free trade in manufacturing within Canada (with the exception of some provincial procurement practices) have not produced equality of productivity by industry across the country within the limits that transportation costs allow. Why, then, should we expect that free trade with the United States will accomplish this? Estimates of the gains to Canada from complete trade liberalization which assume that all productivity differences between the two nations will be eliminated are probably overstatements. Increased exposure to competition from elsewhere in the free trade area does not always bring the efficiency gains one would hope for either — as the record of British industry since its entry into the European Economic Community in 1973 makes clear. Prices do not necessarily equalize among countries even after all allowance for transportation costs — as the EEC situation also demonstrated.² In addition, because of substantial foreign ownership of manufacturing, a portion of any productivity gains will go to foreigners. Estimated benefits from comparative advantage specialization — such as a greater degree of processing of minerals prior to export — may be overstated, too. Improvements in Canadian export prices because U.S. tariffs no longer have to be surmounted are also likely to be pretty small once the Tokyo Round of reductions are in effect. And finally, uninhibited access to the U.S. market, by itself, will not necessarily produce the surge in technological diffusion and new research development, particularly by foreign-owned subsidiaries, that is desired. The Auto Pact has something to teach us in this regard. One result of this agreement is that all R&D by the major firms involved is now being done in the United States.

In short, whether we are considering productivity improvements, the pace of technological advance, or other aspects of meeting foreign competition, a host of domestic traditions, customs, business practices and institutions will have to be dealt with as well. Free trade alone is not enough.

This statement in turn implies that many of the gains often attributed to what free trade can do for us may, to the extent that they are achievable at all, be available even without free trade — if we have the economic and/or political will to bring them about. For example, economists have stressed that free trade will bring benefits by permitting firms to realize greater economies of scale. They have thereby provided

stimulus to businesses and governments to adopt policies domestically to gain such economies. To illustrate, the number of appliance manufacturers in Canada has decreased and production runs have greatly increased since the publication in the mid-1950s of the Gordon Commission reports on these problems in secondary manufacturing.³ Considerable consolidation and increase in the size of plants and production runs also transpired after publication of the 1967 Eastman-Stykolt study focussing on the scale problem.⁴

My second reservation is that we should not underestimate the extent of government involvement that may be required at both provincial and federal levels should complete trade liberalization take place. There will have to be decisions as to which industries to support in their reorganization and rationalization plans and which to let die; how to counter U.S. anti-trust laws; countervail laws, and other such laws like Section 337 of the 1930 U.S. Tariff Act which can restrict imports on the grounds of supposedly unfair trade practices; and what procedures to follow with respect to the frequently dominant role of U.S.-owned firms in Canadian industry and their propensity to import more from U.S. sources than do Canadian-owned firms.

Governments will be “picking the winners,” either explicitly or implicitly. There are bound to be conflicts, not just among the provinces and between the provinces and the federal government, but with U.S. States and Washington as well.

My third reservation is that we must set the possible losses against the possible benefits arising from free trade. These might involve commitments to the United States on long-term pricing and supply of natural resources, which could reduce Canada’s autonomy or the benefits to be gained from its resources. We should also be concerned about what will happen to foreign ownership and the location of industry in the long run. And finally, there is the possibility of economic integration leading to political integration — particularly if Canada is not well-enough prepared when it enters a general free trade arrangement with the United States.

My fourth reservation is that free trade will not resolve many of the problems which Canada is facing with regard to its natural resource sectors.⁵ Indeed, if we have too myopic a focus on Canada-U.S. trade liberalization in manufacturing as some sort of solution to Canada’s unemployment and international competitive problems, we may well neglect to give our resource sectors the attention they require to restore and strengthen their international competitiveness.

This point needs a little elaboration. An enormous amount of research is needed in the agricultural sector to resolve the problems of land quality deterioration; to develop improved varieties of grain and forage crops which will meet international demands more appropriately and help to restore land quality; and to improve the decades-old grain grad-

ing and handling system. Strong steps need to be taken as well to reduce the great inefficiency that has been built up in the nation's dairy and poultry industries, because supply-management systems have protected inefficient production at the expense of the consumer. Horticultural and greenhouse production in this country is also woefully inefficient by U.S. standards. All these problems are unlikely to be altered by any Canada-U.S. free trade arrangement, since agricultural products will probably be excluded. Consumer food prices in Canada can therefore be expected to remain higher than they need be, and this in turn will tend to inflate wage demands and reduce competitiveness in other sectors.

Free trade will not resolve the difficulties Canada faces in the forestry sector either. Much internal research and improvements in forest management must be done if the nation is to have a continuous supply of forest resources for future decades. Compared to many nations Canada is at the infant stage when it comes to forest replanting, thinning, fertilizing, weed control, and disease and insect control. We have had free trade with the United States in the newsprint and wood pulp sectors since the early 1900s, but this has not stimulated the kind of silvaculture techniques that are necessary to maximize the supply and competitiveness of Canada's raw forest resources. Research is also needed to find better ways of using fast-growing hardwoods, which currently are not usable in the production of newsprint and other cheaper papers.

In the crude minerals sector, apart from potash, sulphur, gold, and perhaps aluminum, the competitive position and future world demand for many of Canada's staple minerals are quite weak. Technological developments increasingly allow the replacement of metals such as copper, lead, zinc, and steel by less costly materials such as plastics, glass and ceramics. Demands for metals has also declined because of down-sizing and weight-reducing measures in the automobile, defence products and other industries to reduce energy consumption and costs. Use of lead and asbestos has declined because of greater awareness of their danger to human health. Our once-strong metals sector has exported throughout the world for decades and at the crude stage of processing has faced zero tariffs by most industrialized nations. Yet this world export business did not stimulate the industry to keep itself abreast of striking worldwide changes in the use of metals or to undertake research to develop new uses for metals. Apart from aluminum, new product research by the metals industries has been almost nil. The current status of Canada's metals industries demonstrates that access to world markets is not a satisfactory substitute for wise, forward-looking management.

Similarly, in the fisheries sector, the problem of overcapacity and inefficiency in the actual fishing fleets and at the processing level are almost entirely of Canada's own making. Government policies stimu-

lated the development of this overcapacity and free access to the U.S. market will not remove this overcapacity by itself. Internal Canadian policies must be maintained to rectify the situation, regardless of free trade possibilities.

These comments all suggest that we should not become so enamoured with Canada-U.S. free trade possibilities as a possible long-run solution to Canada's current economic problems that we fail to give adequate attention to these other pressing matters with respect to our natural resource industries. We need to broaden our focus from the Niagara Peninsula, which is only one part of Canada.

In summary, we need to approach generalized free trade with the United States with considerable care. From this perspective, it is instructive to consider what the Senate Committee on Foreign Affairs had to say about free trade.

The Senate Committee on Foreign Affairs and Canada-U.S. Free Trade

In its third volume on Canada-U.S. Relations, the Senate endorsed Canada-U.S. free trade.⁶ The report listed the four benefits mentioned at the beginning of this paper. As already indicated, there are good reasons to believe that these benefits are overstated.

The report assumes that the United States will not object to increased product mandating by subsidiaries in Canada and argues that this practice should continue, even though the United States has been much against this aspect of activities of the Foreign Investment Review Agency (FIRA). In addition, the report seems to assume that the United States will, or should, permit the Canadian government to give R&D grants to industry under such programs as the Program for the Advancement of Industrial Technology, the Defence Industry Program (DIP), the Enterprise Development Program, or regional development grants. Yet, all of these programs are aimed at expanding Canadian production, a substantial portion of which competes with U.S. goods in Canada, in third-country markets, and in the U.S. market as well. The United States has objected to and retaliated against such measures in recent years. Why should they cease to do so in the future?

The Senate's position assumes that the United States, in return for the benefits it will receive from bilateral free trade, will exempt Canada from Section 303 of the 1930 Tariff Act, which permits the Executive to impose countervailing duties on any products deemed to have received subsidies from a foreign government, and from Section 301 of the 1974 Trade Act, which allows retaliation against any measure by a foreign government that either reduces U.S. exports or increases U.S. imports. These laws also authorize retaliation against any Canadian measures, existing or potential, which restrict American cultural influence upon

Canada or limit the right of U.S. parent companies to store massive amounts of data regarding Canadian markets, business activity etc. in their computer files.⁷

The key questions thus are: Are we likely to see exemptions from these acts for Canada? What is in Canada-U.S. free trade for the United States?

The committee seemed rather hard-pressed to develop a convincing argument as to what would cause the United States to enter such an agreement. They essentially concluded that (a) the United States would want Canada to be economically healthy because we buy more from them than anyone else; and (b) the easiest method of precluding growing disagreement with Canada would be to have a formal free trade arrangement on the books. The Senate also cited a statement to Congress by President Reagan intimating that free trade could mean greater economies of scale for U.S. industries and hence greater competitive ability. One would expect that the United States, with its 230 million people, would have already achieved most available scale economies.

The Senate committee was stretched even more when they came to argue the case from the perspective of individual segments in American society. In spite of a number of surveys done in the United States, they admitted that with limited exceptions, such as petrochemicals where many companies were against liberalization, few American firms were interested in or had considered the matter. It was simply not of much concern to them. Labour unions were expected "to be more hesitant" and likely to press for wage parity across the border. The reaction of the individual states was reported, on the basis of one survey, to be reasonably positive. But only about six lines in the entire report was devoted to state matters — a surprising omission given the high degree of state protectionism. Thirty-seven states have legislation giving domestic firms preference, and there are many state limitations on foreign investment in a wide range of industries.⁸ The committee thought that the U.S. government could become interested for the reasons in the foregoing paragraph, although a two-thirds majority in the Senate would be required.

Specific demands that the committee suggests might be made upon Canada would include: (a) giving up all federal and provincial procurement or other practices favouring domestic suppliers in any way, including "buy-domestic" policies, provincial monopolies over wines and spirits, all import displacement programs, the overseeing of purchasing practices of private firms working on megaprojects, and aid to firms believed to be possible "winners"; (b) closing down FIRA entirely, and ending its supervisory role over foreign investments and takeovers, possibly after some adjustment period; (c) surrendering control over services flows, which would include banking, insurance, transportation, communications and information; (d) surrendering the right to charge the United States higher prices for energy than Canadian consumers

pay — in other words, control over raw materials pricing in Canada in general. The Senate group did not see the contradictions between these expected requests by the United States and the very things they themselves said should be allowed to continue, such as regional development, R&D grants and adjustment assistance which will frequently involve import displacement if successful.

What is perhaps most interesting about these statements is that although the committee saw free trade negotiation as a means by which Canada might get “a handle on U.S. non-tariff barriers,” there were glaring omissions in what they expected of the United States. They did not come to grips with how the U.S. government could convince the states to cease their protectionist practices. (This is not surprising given that on occasion the federal U.S. authorities have disclaimed any authority over state legislatures.) The committee did not grapple with the many federal statutes which can be used to obstruct takeovers or new investment by foreign firms in the United States. Nor did they deal with the propensity of U.S. subsidiaries in Canada to rely far more on American suppliers, particularly affiliates, than Canadian firms do. The committee cites, without any dissent, a U.S. source saying that the president would not have much time to devote to pushing an agreement through Congress “until other major domestic restructuring was in place.” Apparently restructuring, whatever that may involve, is acceptable for the United States to undertake prior to trade liberalization, even though such a policy is not favoured for Canada.

It is probably not surprising that many U.S. firms are not particularly interested in free trade with Canada. On the one hand, they may not have perceived that greater efficiency in their Canadian operations is necessary in the longer run if they are to survive against third-country competition as Canadian tariff barriers come down. On the other hand, they may feel that as the Tokyo Round of tariff restrictions occur in Canada and the United States, they will be able to rationalize sufficiently within their own operations across the border to compete with other countries without necessarily encouraging all Canadian industry to do the same via an across-the-board free trade arrangement. Some companies have already moved in this direction.

This discussion leads to the question of the sort of “strong Canada” the United States in general would prefer. If free trade leads to a more technologically advanced Canada, able to compete in more processed resources and high technology in U.S. and world markets, that is, if the gains for Canada are actually what the Senate committee says they will be, the United States may not be at all happy. The United States might well prefer a strong resource-based Canada, willing to buy U.S. manufactured products such as high technology and equipment while confining itself to the traditional role of producing resources and shipping them to the United States for processing. The income gains for Canada

under such circumstances might not be as high as they would be if Canada became a more successful producer of sophisticated technology, and this in turn means the Canadian domestic market for U.S. consumption goods might not be as great. However, this may be relatively unimportant to the United States. Many consumption goods are low technology goods which are often highly labour intensive, such as food, clothing, footwear, furniture, tools, and toys. These are increasingly supplied by developing countries and are not growth industries for U.S. suppliers. As long as Canada exploits its resources, it will provide a market for high technology and capital products from the United States.

Again, the idea that negotiating a free trade area will reduce areas of conflict may or may not be so — probably not, in the short run. Since both countries will want to retain such measures as anti-dumping laws and safeguard provisions, some sorts of regional incentives, and research and development grants, there will be no decrease in the volume of heated negotiations and they could become vitriolic on occasion. The 1974 U.S. Trade Act, for example, permits vigorous application of anti-dumping policies and escape clause relief without requiring proof of injury, and Section 337 of the 1930 Tariff Act permits obstruction of imports on the basis of unfair trade practices even before they enter the country.⁹

I am suggesting that for the United States to be interested, free trade would have to result in a strong Canada as they define it, a nation that will continue to maintain its traditional role of “hewer of wood and drawer of water,” with many of the conditions of hewing and drawing set by the United States. The events of the past few years certainly fit this hypothesis.¹⁰

Then there is the matter of possible abrogation of the treaty. The Senate report, following other authors, suggests that this is not a big problem, presumably because by the time such a question could arise, Canadian manufacturing would be restructured, more competitive, more technologically advanced, and therefore more capable of standing on its own two feet. But this need not follow. Is it not conceivable that we could end up with other industries akin to what we have in the automobile industry with all R&D and most major decisions made in the United States? If the United States were to abrogate the Auto Pact today, the Canadian automotive sector would probably have a more difficult time. In the machinery and equipment sectors, free trade might well perpetuate the existing pattern in those areas where we have specialized in the more standard low-growth types of equipment and have less capability in higher technology equipment than we had some years ago.

Advocates of free trade suggest that this would not happen because free trade would ensure a ready market for innovative Canadian products in the United States and therefore both domestic and foreign-owned

firms in Canada may be inclined to do more research in this country. But if a majority of the producers are U.S.-owned and/or the United States rejected product mandating to Canada as a precondition for entering free trade, what reason would U.S. firms have to alter their present practices? They could continue to do the high technology work in the United States and leave the standardized machinery for Canada. And Canadian firms may be content with licensing for the production of standardized products. If, in the future, a larger proportion of Canadian exports were standard-type goods going to the United States, then if the treaty were abrogated, the United States could readily get such equipment elsewhere. But Canada might not have many other markets and would probably be unable to develop new markets quickly in the rest of the world. Yet, we would still likely have to import parts and even new equipment from the United States.¹¹ Indeed, this may be what the United States would hope to achieve from a free trade arrangement — that Canada would become more dependent on the United States. Canada could easily become more vulnerable than before.

The Senate committee argues that we would have leverage over the United States through our control of resources. However, if we have lost access to the United States for our manufactured products, then we would not be in much of a position to withhold resources too — if we wished to have a viable balance of payments. Contrary to the committee's view, our power to tax U.S. companies would not be a particularly strong deterrent either against their abrogating the treaty. If the United States gave notice of intention to abrogate within a given time, their companies would be able to "suck out" most of their liquid assets and run down the rest of them. And if U.S. markets for their products were closed, profits would be small or negative. In short, there might not be all that much to tax.

Finally, there is the question of whether economic integration might lead to political integration. The committee quotes Peyton Lyon as stating that there has never been a situation historically when a free trade area has moved on to political integration. Yet, we do know, of course, that the customs union of 1834 called the Zollverein became, under Prussian leadership, the state of Germany. The committee's view seems based, in part, on the belief that tax and other policy harmonization is not necessary. But will Canada have full independence in this regard? Certainly we could not have substantially higher corporate taxes, for example, or foreign companies would not want to locate here. If we have much lower taxes, we could be accused of subsidizing industry. Or we would simply be subsidizing the U.S. treasury to the extent that lower Canadian taxes would mean that the U.S. practice of giving tax credit in the United States for taxes paid outside the country would raise taxes on the parent firms in that nation. The Senate does accept, however, that we may have to follow U.S. monetary policy to a larger degree. And they seem to believe that we would have to have free trade with regard to

banking, transportation and communications. Thus, we would forgo much cultural sovereignty. So I am not as convinced as the Senate committee that we would retain our political identity over time, especially given the fact that there is probably no more nationalistic country than the United States in the free world. Canada in turn still has a very fragmented identity which, at least in past years, has been aggravated by the continual rounds of federal-provincial confrontations and the frequent siding of provincial governments with Washington rather than Ottawa.

I do not submit these remarks on free trade with the United States as the final word on this issue. But they should at least indicate how much of the argument in favour of such an arrangement at this time is based on a rather one-sided view of what might happen, rather than on indisputable facts. It is surprising that the Senate committee, and other groups too on occasion, have chosen to ignore some of the other scenarios that might have been considered with respect to a number of the issues.

Sectoral Free Trade

A 1983 discussion paper of the Department of External Affairs entitled *Canadian Trade Policy for the 1980s*¹² mentions the possibility of negotiating sectoral free trade arrangements with the United States in industries where Canada has already become fairly competitive with U.S. production. This proposal may have some merits. The industries referred to in the report are urban mass transit equipment, petrochemicals and textiles. The mass transit equipment industry has grown and prospered in Canada while its U.S. counterpart has been allowed to atrophy. Petrochemicals and textiles are industries in which considerable rationalization has occurred over the last decade or so. Existing plants are both technologically advanced and of sizable scale. And, in contrast to automobile production, there is significant Canadian ownership in these industries.

Following are some of the possible benefits to be gained with the United States in sectors where Canadian industry is already competitive.

- Negotiations should give Canada some idea of the sincerity of U.S. adherence to the principle of freer trade and of the type of demands the United States will place on Canada. The Report of the Standing Senate Committee on Foreign Affairs observed that a number of U.S. petrochemical companies oppose free trade with Canada. If the United States wanted some control over the prices of inputs, such as natural gas, going into the Canadian petrochemical industry, this would be a clear warning to Canada of possible U.S. responses to any broader trade liberalization initiatives by Canada in the future.

- It takes great energy, skill and care to negotiate new trade arrangements. The sectoral approach would economize on the use of the scarce human resources needed to reflect industrial, provincial and regional interests. In any across-the-board freer trade negotiations, the United States, with about ten times the population of Canada to draw upon, would quite likely be able to put together stronger negotiating teams. For this reason too, the sectoral approach may have some advantage.
- Canada's negotiating strength would be enhanced because we have some initial strength in these industries. Moreover, there would be less concern that the Canadian industries would be overwhelmed or completely taken over by their American counterparts, or that R&D or production activity would be shifted to the United States. In general, this approach would reduce the threat of potential economic and political domination by the United States.
- The sectoral approach is useful because it illustrates (a) the potential for internal rationalization measures prior to free trade negotiations; (b) the dangers from a lack of appropriate cooperative measures among the provinces and between the provinces and the federal government; and (c) the fact that free trade measures alone will not compensate for management weaknesses or similar problems. Such strength as does exist vis-à-vis the United States in textiles or petrochemicals did not all evolve through market forces alone. Substantial government initiatives and incentives were involved. But concomitantly, the lack of coordination between East and West has contributed to the present excess capacity and difficulties of the eastern petrochemical industry in Montreal and Sarnia. Finally, if we consider the farm machinery sector, which has enjoyed a limited form of free trade for nearly four decades, we see that the absence of trade restrictions does not preclude industrial difficulties for firms if management performance is weak.

The most common argument against sectoral free trade is that the industries concerned may face tariffs on machinery, equipment or other inputs that are not in the sector, and may thus be at a competitive disadvantage to foreign firms. However, this need not be a problem if tariff rebates are allowed on all inputs to the industry, as has been the practice for the farm machinery industry.

A more specific disadvantage of a sectoral arrangement relates to the textile industry. If an agreement can produce greater efficiency, fine. But if it could lead to expansion of the industry when we know that in the long run the true comparative advantage lies with the developing countries, it would be an unwise policy move.

There is also the problem of getting agreement across the border on which industries to include. The United States is probably not eager to negotiate on urban transportation equipment, for example, since Budd is

the only U.S. firm with much capability in this work. There may also be some concern about whether sectoral arrangements violate the General Agreement on Tariffs and Trade, but given all other violations of the GATT by a variety of countries, this is probably not too important an issue.

In general, sectoral free trade negotiations would be most useful for Canada where considerable internal rationalization and modernization have already occurred. However, sectoral free trade is probably not all that promising an approach when the U.S. and Canadian economies have as much unemployment as they do at present. Trade liberalization negotiations are usually more readily conducted in prosperous times. But as long as we are not prepared to sell out the ship because of overstating the net benefits from free trade, sectoral negotiations may be valuable.

Notes

This paper was originally written in early October 1983. It was presented at the Symposium on U.S.-Canada Free Trade held by the Royal Commission on the Economic Union and Development Prospects for Canada on October 6, 1983. At the current time (February 1985), it appears that the sectoral idea has been shelved. But it may be worthwhile for the historical record to make these comments.

1. Unless otherwise indicated, this section relies on B.W. Wilkinson, "Reservations About a Canadian-U.S. Free-Trade Arrangement at This Time," in *Canada in the Changing World Economy* (Montreal: C.D. Howe Research Institute, 1980), Appendix D, pp. 158-70; and "Canada-U.S. Free Trade and Some Options," *Canadian Public Policy* 8 (Supplement, 1982): 428-39.
2. *The Economist*, July 23, 1983, p. 46. Differences in car prices are mentioned, and video recorder prices are reported to vary by as much as 138 percent.
3. Royal Commission on Canada's Economic Prospects, *Final Report* (Ottawa: Queen's Printer, 1957).
4. H. Eastman and S. Stykolt, *The Tariff and Competition in Canada* (Toronto: Macmillan, 1967).
5. This draws on a recent paper, B.W. Wilkinson, "Commercial Policy and Free Trade with the United States," in *Canada Among Nations 1984: A Time of Transition*, M. Molot and B. Tomlin, editors (Toronto: James Lorimer, 1985).
6. The Standing Senate Committee on Foreign Affairs, *Canada-United States Trade Relations, Volume III: Canada's Trade Relations with the United States* (Ottawa: Minister of Supply and Services Canada, 1982).
7. Stephen Clarkson, *Canada and the Reagan Challenge* (Ottawa: Canadian Institute for Economic Policy, 1982), pp. 221-24.
8. These include land ownership and use, agriculture, banking, energy and fossil fuels, commercial fishing and maritime, insurance, mining, utilities and other corporations in general. See Foreign Investment Review Agency, *Barriers to Foreign Investment in the United States* (Ottawa, 1982).
9. F. Lazar, *The New Protectionism: Non-Tariff Barriers and their Effects on Canada* (Ottawa: Canadian Institute for Economic Policy, 1981), pp. 39-44.
10. See Clarkson, *Canada and the Reagan Challenge*.
11. B.W. Wilkinson, "L'Impacte d'une zone de libre-échange entre le Canada et les Etats-Unis: Examen critique de l'étude de Wonnacott," *L'Actualité Economique* (October/December 1976), pp. 473-88.
12. Department of External Affairs, *Canadian Trade Policy for the 1980s: A Discussion Paper* (Ottawa: Minister of Supply and Services Canada, 1983).



U.S.-Canada Free Trade: An American View

WILLIAM DIEBOLD

An historical look at U.S.-Canadian free trade issues reveals that every time there is a new expression of interest in them, the same pattern develops. The subject is taken seriously by many people, in Canada very seriously by quite a few. Some good work is done about it. Sometimes nothing happens politically; sometimes some political movement begins. But then, for one reason or another, a strong political reaction cuts off whatever process had begun.

Is the automobile agreement an exception to that? Probably not, because the automobile agreement really was not an effort to expand free trade; it was a conflict resolution. It was intended to keep things from getting worse; maybe it gained a little support from the old dreams.

Another question that arises is — why now? This issue must be related to other questions about the world and about the bilateral relation. What is new? Both countries are in economically bad situations and although recovery is coming along, few people feel sure of the future. Certainly, recovery alone will not solve the fundamental problems of the two countries that predate this recession. The structural problems of the Canadian economy have been discussed for a long time. The various kinds of measures that have been taken in recent years have had different kinds of results and increasingly raise questions about Canada's relations with the rest of the world and especially the United States. Shifts in power inside Canada have put in doubt what were once politically acceptable arrangements.

Take the very existence of the Royal Commission. I suppose the Commission has to touch all bases and free trade with the United States is clearly a well-marked base. But is that the only reason we are talking about it? I have a sense that we go beyond that. There is the important question of the rise and fall of tensions between the United States and

Canada. Everybody knows the history of the last few years and how it now seems to have been changed. Some people compare 1981–82 with 1971 and see it as a period of real change in the relationship that will alter what is going to happen in the future. I have to reserve judgment about that, but it certainly raises questions as to whether such a view could affect the Canadian government and perhaps others. This is connected with the concern many of us feel about growing nationalism in American economic policy and the problem of where Canada is going to stand if that develops.

Yet another question concerns the possibility of significantly large changes in world trading arrangements either through American initiatives or otherwise. If the system we have known since the end of the war is altered, how will that affect the bilateral relation or the position of Canada in the world more generally? It is obvious that neither Western Europe nor the rest of the world will make it easier to expand multilateral economic cooperation either now or in the future. Miriam Camps and I have written a pamphlet for the Council on Foreign Relations, titled “The New Multilateralism: Can the World Trading System Be Saved?” The answer to the question is — yes, if it can be changed. One of the main concerns of the pamphlet is the deterioration of the trading system, the deterioration of the will to cooperate, and the probable continuation of that deterioration rather than its rectification.

Putting together these possibilities does not explain what is happening. I am not sure what Canadians are up to or what I am really looking at. John Dickey once said that economic relations between Canada and the United States are an interplay where there is room for almost anything to be both true and untrue. With that proviso, let us briefly consider three sets of issues: some analytical points; the question of U.S. posture and policy; and the global setting.

Analytical Points

It seems clear that we are not talking just about free trade, sectorally or generally, but also about a whole set of other parts of the relationship and about national economic measures, policies, and conditions in both countries that have a great deal to do with what free trade in any given circumstances would mean. Perhaps we are not even really talking about free trade as a goal. Years ago that term became shorthand; we must be aware that it is rarely to be taken literally and is often a caricature. It can even mislead. I learned that a long time ago in the State Department in 1945 and 1946 when correcting the pieces that the public relations people wanted to write about the United States being in favour of free trade. We were only for freer trade. I think that is still true. I do not know any government that stands for free trade. In spite of what many say, the GATT has nothing to do with free trade; it is a process of trade liberalization, of reducing barriers.

Today, it is clear, we are talking about a wide range of issues. Some are called industrial policy, some are called management of the economy, some are called other things. I agree with Professor Watkins that it is not useful to talk only about free trade and only about protection and protectionism. I agree with him that we need to bring more economic history to bear on this issue and that it is much harder to tell what protection has really done than is generally assumed. But in terms of current policy, I am more concerned about how to control the protection that everyone engages in. It seems to me that what we end up with is not managed trade but managed protection. If we manage protection badly, then I think we do not succeed in getting whatever bits of good there are in it and we end up with those things that have given protection its deservedly bad reputation.

Another reason to go beyond the common simplifications is that trade liberalization — free trade, if you want to call it that — between Canada and the United States has been brought about in several different ways. The largest part of it has been the by-product of multilateral negotiations. Some of that was really bilateral, but in a multilateral framework. Some of it was the extension by most-favoured-nation treatment of reductions negotiated with other countries. Some free trade has come through unilateral action, as in energy and farm machinery and more recently in trucking. Some of it has come by purposive action to create free trade, as in automobiles and defence supplies. And some of it has come by the application to the bilateral relation of trade rules that are often of a more general sort, such as the GATT antidumping code, the code on valuation, and the beginnings of rules about subsidies. There is also free trade resulting from the structure of industry in North America, notably intrafirm trade. Although we hear complaints that American-owned firms in Canada are not allowed to export, there has also been a good bit of trade carried on within North America on an intrafirm basis with only secondary concern for trade barriers. Altogether, there is enough free trade — the numbers vary — for North Americans to ask themselves whether they need to worry about the issue. Is the remaining trade all that important? If all the other barriers have been removed, is it really a big issue to do the same for what is left?

The answer lies in my claim that we are really talking about something more than simply the removal of tariffs, or even the more obvious non-tariff barriers. We have to consider the whole range of economic relations.

Trade policy alone is not the key to Canadian-American relations concerning energy, agriculture, or the aircraft industry. We have to take account of the links of trade with investment, with the private choices of management, with public policy at different levels of governments, with the exchange rate, and with concern over the balance of payments. All of these things seem inescapable and should be on our minds when we talk

of a free trade area or free trade in the world or a sectoral approach. That raises the question of whether we are talking about the wrong issue entirely when we talk about free trade. In an unpublished paper written for the Council on Foreign Relations, tracing the history of Canadian-American free trade discussions, Sperry Lea said that we are really talking about industrial policy, industrial strategies, and related activities. That seems odd when the United States is supposed not to have an industrial policy. Nevertheless, he is right if the term industrial policy is taken to cover all of the things I have already talked about. To see what this difference in emphasis means, let us look at several sectors. They are very different and completely different problems are going to arise when one deals with them, even if one says that the objective is free trade.

Consider textiles. The problem is to adjust the industry in both the United States and Canada to a set of shifts in the world's structure of production. There are certainly Canadian and American firms or activities that are competitive internationally, but many depend entirely on very rigorous protection against the Third World. The question to be asked is not whether there is some useful bit of increase of liberalization but instead, whether there could be a better adjustment of the North American textile industry if the two countries acted together rather than acting separately. That is a complex issue.

In petrochemicals, one cannot escape the question of Canada's policy of energy prices. There has been little mention of another central fact — that globally the whole chemical industry has surplus capacity — so again the problem is whether this issue is better dealt with by the two countries acting together or separately.

Surface transport is particularly interesting, not just for the obvious reason that Canada has shown an advantage here and wants now to see if it can hold that advantage in spite of the contrary forces in the United States. That can only be the beginning of a negotiation. The Bombardier case showed how complex the interests are inside the United States. It is a question not only of the proper rules for government procurement but also of the effect of a nominally domestic or foreign purchase. How does one compare the interests of the subway rider in New York with those of the worker in the Budd plant in Detroit? Competing suppliers provided different proportions of the final product from imports or plants in New England or New York; profits would flow to Quebec, West Germany, Japan and other countries from "domestic" operations. Indirectly, American exports would be influenced as well. The great importance of this kind of issue is that it begins to show an aspect of Canadian-American relations that is totally ignored when one uses conventional neo-mercantilist views of what is national interest and tots it all up on the trade balance.

A discussion of sectors would not be complete without considering automobiles. Earlier discussions assumed that this was all one industry. But what if the two countries were to go in opposite directions on content legislation? One sector's action begets another. One cannot really talk about surface transport or automobiles without talking about steel. Does Canada tacitly go along with American import restraints or is it getting a small free ride? In high technology industries, a sector approach might be interesting. The United States is talking seriously with Japan; what about Canada's interests in this field? If the U.S. government is going to foster changes in industrial structure (other than in declining industries), it is going to be here. The question is not going to be just protection but also export promotion, the competitiveness of other industries, and what is fair competition. The fact that the high technology issue was dropped at the GATT ministerial meeting in November 1982 is a comment on its importance, not its unimportance. The related question of R&D and when government support for R&D is a trade subsidy is a Canadian-American question that cannot be escaped whatever sectors we look at.

U.S. Posture and Policy

What about the broad question of the proper American response to the Canadian interest in free trade? Nobody needs to be told why everything depends on Canada's taking the initiative. It is not sensible, and has not been sensible for many years, for the United States to take major initiatives about free trade (or any version of it) between the United States and Canada. The real question is what the United States should do when Canadians raise the issue.

My first recommendation is to stand still and wait. That has already happened. Now there has been a Canadian step. It is not clear how firm, how far, and perhaps even in what direction, but some American response is called for.

So we come to the second recommendation, which is to take these issues seriously and begin studying them. It is very important not just to study but to look frankly at the real issues, and from the beginning to avoid treating study as a way of bargaining. Without this kind of approach there can be no sensible result. Whatever is impossible or unacceptable in either of the countries had better be recognized very early (and not just as a bargaining position) or there will be great disillusionment later. It is obvious that the interest of the American public in the overall approach is almost always going to be less strong than that on the Canadian side. The big adjustments as well as the big gains must generally lie in Canada. This will not be true of every sector; much depends on how one defines industries and sectors. That is another reason for a joint study or at least for careful and honest

exchanges. Most of these issues have not been seriously looked at in the United States, certainly not on the scale that they have been studied in Canada. Consequently, it is hard now to be realistic about who gains and who loses, who gets what, and so on. This is very important because we are talking about a political process in which it will be difficult to sort out the general American interest when the strongest statements come from those who think they are going to be hurt.

Long ago, I came to the conclusion that any major formal changes in the bilateral economic relations would have to include some safeguards for Canada. This follows naturally from the asymmetry of the relationship, but one cannot assume that most Americans will see the issue that way. I would advise an American government to accept the general idea but to concentrate on the specific measures that might be taken in each sector or industry. The initial safeguards in the automobile agreement always seemed natural enough to me but they were very badly handled. To perpetuate them without taking account of the passage of time was worse and maybe, as some Canadians have suggested, they are not even really needed. If so, that shows a lack of sense in approaching the whole problem. But maybe there has to be some continuing assurance to the Canadian side.

Probably the same thing can be done in different fields. I never took seriously the argument that only in the automobile industry could there be sector agreements because of the unique conditions of production, ownership, and so forth. It is true that those conditions were unique and made certain things possible. But most industries have conditions that are in some respect unique. In a different industry something else may be possible.

The question of safeguards is more complicated than it sounds. Professor Helleiner made an important point when he noted that, to the extent that the arrangement itself can be balanced, in the long run there are safeguards that cannot be provided by formal commitment. But in economic relations, I do not think there is any way to be absolutely sure that a situation will not turn around.

There is another point, hardly new. A former Canadian Ambassador to the United States, A.E. Ritchie, said in 1970, "If you are going to get any concessions out of the United States, you must expect to negotiate something that they will regard as reasonably balanced." That seems elementary, but sometimes in Canadian-American relations the elementary needs to be emphasized because it does tend to disappear. Similarly, a sector, industry or region can easily be imagined in which safeguards against untoward effects would have to be provided for American interests.

Learning by negotiating is terribly important here because there has probably been nobody in the United States who has thought through all of the issues that are going to arise in a serious negotiation about free

trade in general or the sectoral arrangements suggested by the Canadian government. They need to be found out. Little can be learned by negotiation unless both sides have some reasonably clear idea of what they want to do. That does not require a prior commitment to a given pattern of free trade or a given balance of trade, or other specified results, but there must be some idea that there are mutual advantages in moving in a certain direction. In the paper already referred to, Miriam Camps and I point out that when new ground is broken, negotiation is the way in which the possibilities of agreement or accommodation are discovered.

The interests in free trade with the United States differ from area to area and industry to industry in Canada, and that is obviously true in the United States as well. In the last year or so, the Canadian government has, in effect, announced a policy of carrying diplomacy into the United States to look for allies inside the American economy and the American political process to see if they cannot be more effectively mobilized to get the things that Canada wants. That is a special subject which has a lot of difficulties about it, but it fits with the nature — the obscure nature perhaps — of national interest in the Canadian-American setting. The density of the relationship, the complexity, the fact that the advantages are apt to go to different places — money paid here comes out there — all make it peculiarly difficult to see who gets what in this system. And therefore it is probably a good idea to carry on relations in ways quite different from traditional diplomacy, if that can be done efficiently. But that idea raises awkward problems and we shall probably have more national and bilateral difficulties along these lines in the future.

The Global Setting

Now, finally, there is the question of how changes in Canadian-American trade relate to global issues including trade diversion and third countries. Long ago I noted that the Canadian definition of North America ends at the Rio Grande. I do not think that American policy is going to treat Mexico in the future as it did in the past. Indeed, there were times when it took Canadians to remind Americans that Mexico was there. It is interesting that it is now necessary to do the opposite. This is not a veiled suggestion of a North American common market, which I have always thought was a lot of nonsense, but it does underline the fact that any kind of preferential arrangement (the word is used quite generally) between the United States and Canada has other dimensions.

After Mexico, there are other third countries to consider in some industries. Japan is of great concern to both our countries. The trade diversion vis-à-vis Japan does not seem important. The question is whether new kinds of international understandings can be found that build on the dynamism of Japan instead of on its protectionism, or ours.

Is this whole Pacific orientation a reality we can work with, especially if Europe is going to continue to be as difficult as seems likely?

Which way is American policy going to go? This is really the hardest question. I certainly have no way of predicting, but in the relatively near future, say three to five years, there really are only two broad possibilities. One is the resurgence of the kind of economic nationalism the United States showed in 1971. It is not so far under the surface in the United States now and is guided by all the familiar pressures in Congress: the narrow concepts of reciprocity, the hit-him-again response, the emphasis on unfair trade, and so on. Even if all that adds up to a fairly nationalistic and narrowly mercantilistic point of view, it does not mean that everything will be simply protectionist. The protectionist element will be strong, but there will also be an emphasis on increasing the American share of world markets, on pushing exports, and on coping with what is called unfair competition in third country markets.

The second possible direction of American policy also calls for action. But the emphasis is very different. It recognizes that in the long run national rivalry, standing alone, is a mug's game. The real question is what can be done to strengthen the international system. For answers I have to go back to "The New Multilateralism" — the pamphlet Miriam Camp and I wrote for the Council on Foreign Relations. We say there that the wise course for American trade policy — and for other countries as well — is to push ahead, strengthen existing rules, and reach new understandings in areas where there is now no real agreement. In dealing with immediate problems, one should at the same time make lasting improvements in the system of international cooperation. Sometimes the starting place may have to be in negotiations among only a few countries — and perhaps only two.

Consider, for example, some of the questions facing Canada and the United States. What is a subsidy? What is an unfair subsidy? What is the proper objective of a subsidy? What relationship of government to business is compatible with fair trade? What state and provincial tax concessions are unfair? There are many others. (If some of these issues have not yet been raised bilaterally, they will be.) The same problems exist on a global basis. Some are, in principle, covered by the subsidies code in the GATT, but not everyone accepts that. That key code is not making a great deal of progress; it is going to be a long slow process — if it moves ahead at all. Is there a possibility that by making sensible arrangements on some of these things on a Canadian-American basis, one could not only remove the causes of difficulties and provide some economic advantages for both countries, but could also give a lead that could be followed by other countries and eventually be embodied in the multilateral system? This is very complicated, very delicate. But if something like that cannot be done, then you are thrown back onto the alternatives of either trying to move ahead multilaterally while the

bilateral trouble gets worse, or making bilateral arrangements that disregard the system and third countries. Either way, the system may break down. That is what is bound to happen if countries resort to unilateral measures because their other efforts fail.

So two directions are possible for American policy — mercantilism or an effort to strengthen the cooperative system. In either case, the question that arises is where is Canada. Canadians have worried about this issue before. They have a natural penchant for multilateralism but not always a clear choice. The 1947–48 negotiations for a free trade area with the United States were turned down by Prime Minister Mackenzie King at the end, because, he said, of the British connection. In the 1960s, the great Canadian interest in some sort of special economic relationship with the United States was very much influenced by the sense that Britain was going into the Common Market and Canada would be one of the few countries in the world that did not belong in a large bloc of some sort. All of this is in some sense true. At present, the Canadian calculation is difficult, especially if mercantilism is a real threat, but multilateral cooperation is breaking down anyhow. It is clear why one should insist on dealing with these things in the GATT — because there Canada will have allies against the United States and there are rules and slow procedures. But if the serious issues between the two countries do not get resolved by this method, the approach may not be very helpful.

Canadians often feel that they must keep their hands free to use certain instruments of policy, such as subsidies or national procurement, to pursue major objectives. They may be right but if Canada is free to act because there are no international rules, then so is the United States. What the dilemma calls for is an effort to find international agreements that satisfy both countries. There is no predicting where such an effort will lead them but the problems will not disappear. If Canadians and Americans are as pragmatic as they like to think they are, they will say: “Let’s see what we can work out.”

I fear this survey must end on a slightly sombre note. Supposing that Canada opts for a set of pragmatic approaches, looking for balanced bargains, and that the rest of the world proves no more willing to increase the scope of multilateral cooperation than it has been for some time, then willy-nilly, some concepts that have been very unpopular in Canada come back into the picture. A kind of exceptionalism in relation to the United States becomes so valuable as to be almost irresistible. It is not the product of Canadian softness, American hardness, or American generosity. It arises from the fundamental, inescapable, complex and unique set of relations of the two countries. What balance to strike in conducting the relationship is up to Canadians.

Conclusion

My thoughts can be summed up in two paragraphs. On this subject, Americans ought to talk softly, if they talk at all. Canadian relations with the United States, particularly trading relations, raise old problems that Canadians are far better equipped to judge than we. As an economist, I am bound to say that, as the removal of trade barriers between countries usually makes for a gain, it is pretty clear that Canada and the United States would gain from the reduction of barriers between them. One presumes the gain would be much greater for Canada than for the United States, simply because of the difference in size. By the same token, the adjustment would be greater for Canada. Of course, more is involved than even the most sophisticated calculation of benefits and costs can reveal. It is up to Canadians to make up their minds about what they want, and then it is up to Canada to raise issues with the United States. I would hope that Canada finds better ways to raise them than the way the automobile issue was raised. I share the preference of many Canadians for trade liberalization over the broadest possible area and for non-violation of GATT principles and of the most-favoured-nation clause. But narrower alternatives have to be looked at very seriously, as some Canadians are pointing out.

If some kind of bilateral trade liberalization materializes, there will be a case for taking particular care of Canada's adjustment problems. But I feel sure that Canadians would not expect the United States to agree to wholly one-sided agreements or to so-called liberalization programs that are surrounded by safeguards that deny to either or both of the parties most of the benefits of free trade. Nor do Canadians need to be reminded that the road to trade liberalization is not made of easy, painless agreements. We are helped by challenge from and confrontation with our friends, not by their soft-heartedness. We in the United States have been helped very much in lowering our tariffs by the attitude of outsiders, and we would be willing to do as much for Canada. Maybe the time is coming when the United States and Canada can again work together effectively, not only on bilateral trade but on world trading arrangements as well.

The last two paragraphs, lightly edited, come from a talk at the Seignior Club, at a conference sponsored by the Private Planning Association of Canada, on November 15, 1966.

Notes

Based on a speech given at the Symposium on a Possible Canada-U.S. Free Trade Arrangement held by the Royal Commission on the Economic Union and Development Prospects for Canada on October 6, 1983, in Ottawa.



Canadian Gains from Trade in the Presence of Scale Economies and Imperfect Competition

JAMES R. MARKUSEN

Introduction

The question of the gains from free trade has long been an area of controversy among economists, policy makers, and special interest groups. Participants in this debate can loosely, but certainly not categorically, be grouped into pro- and anti-free trade factions, with the manufacturing sector usually providing one focus of the debate. Perhaps not surprisingly, the various groups tend to have different objectives in mind and, for a given objective, tend to view different considerations as being of primary importance.

Economists usually view per capita income or total GNP as the policy objective and tend to be pro-free trade in orientation.¹ Exceptions can certainly be found, but those economists who are anti-free trade are often interested in non-GNP objectives (e.g., “economic nationalism”) or view increases in GNP as not worth the possible adjustment costs and income redistribution associated with that increased GNP.

Among mainstream economists, there have traditionally been two separate subgroups, which can be distinguished by their theoretical orientation. One group might be called neoclassical trade theorists, among whom the late Harry Johnson would be an important Canadian example. This group uses the neoclassical general equilibrium model as its main tool of analysis, the main assumptions about production being constant returns to scale and perfect competition. If Canada is viewed as a small country relative to its major trading partners, this model predicts that Canadian GNP would be maximized by free trade.

The second school of analysis has traditionally used the partial equilibrium techniques of industrial organization theory, in which the principal assumptions are that production functions are characterized by increasing returns to scale (decreasing costs) over some range of output.

If scale economies are important relative to the size of the market, only a few firms will exist in equilibrium. Scale economies therefore tend to be associated with imperfect competition. The manufacturing sector has provided the main area of concern for industrial organization economists. Early and still widely referenced works include Eastman and Stykolt (1967) and Wonnacott and Wonnacott (1967). These and later writers emphasize that benefits from free trade to Canada include lower average production costs through longer production runs and larger average plant size. These benefits of increased scale include both lower product prices and higher real wages.

Until very recently, the two approaches were never integrated and the best that each school of thought could do was make a broad comment about the other. The industrial organization approach, on the one hand, suggested that the neoclassical trade economists significantly underestimate the gains from trade for a small country by ignoring scale economies and the consequent production rationalization benefits of trade. The best response of the trade economists, on the other hand, was to say that the deviations from perfect competition (more correctly, deviations from marginal cost pricing) associated with scale economies constitute distortions in the system. In the presence of such distortions, free trade is not guaranteed to improve welfare over a restricted or even a no-trade situation. This view is nothing other than a simple application of the theory of the second best: removing one distortion (barriers to trade) in the presence of other distortions (deviations from marginal cost pricing) is not guaranteed to improve welfare. It must be strongly emphasized that the neoclassical school does not deny that scale economies are a major source of gains from trade — rather it simply adopts an agnostic attitude. With distortions, anything is theoretically possible, which is far removed from a statement as to what is probable.

Outside of academic economics, one gets the impression that people are often more concerned about the effects of free trade on the size and composition of the manufacturing sector than about the level of GNP per se. It is not clear whether these individuals believe that GNP is positively related to the level of manufacturing activity or whether they simply want Canada to produce these goods. In any case, there is the fear that free trade will leave Canadians as “hewers of wood and drawers of water.” I presume that this hypothesis embodies two separate propositions: first, that the size of the Canadian manufacturing sector would be reduced by free trade, and second, that this would be harmful in some well-defined welfare sense.

The purposes of this study are twofold. First, the results of many recent theoretical advances will be surveyed and synthesized to provide a unified view of the gains from trade that incorporates scale economies and imperfect competition into a simple general equilibrium model. Second, the insights gained from this exercise will be used to evaluate

the results of the early and the more recent industrial organization analyses of the effects of protection. While overall per capita GNP will form the principal focus of the paper, issues relating to the size of the manufacturing sector will also be alluded to. Indeed, it will be shown that the two are not entirely independent.

To summarize briefly the main findings of the paper, it is noted below that recent theoretical papers on the gains from trade in the presence of scale economies and imperfect competition consistently show that what I call a "production rationalization effect" is sufficient to ensure that the distortionary aspects mentioned above do not interfere with the realization of gains from trade. This rationalization criterion is satisfied for an increasing returns industry if free trade either leads to increased output and therefore lower average cost, or to domestic production being entirely eliminated and replaced by a lower-cost import.

This result, which can be rigorously derived from a full general equilibrium model, is surprisingly and satisfyingly consistent with the partial equilibrium, industrial organization view. That literature, as noted above, has emphasized production rationalization as a source of gains from trade in the presence of scale economies. By rationalization, the industrial organization economists mean that the manufacturing sector becomes more specialized. Some products are produced in longer production runs at lower average cost, while others are eliminated by lower-cost foreign substitutes. The production rationalization emphasized by industrial organization economists becomes a sufficient condition for unambiguous gains from trade in the more rigorous general equilibrium analysis.

To say that rationalization in the manufacturing sector is sufficient for gains from trade is not to say that it will occur in response to free trade. The theoretical model used in the paper does, however, highlight those underlying features of the economy which will ensure that the economy will respond to freer trade by rationalizing. The first two features are that the country is small as compared to its major trading partners and possesses technology relatively equivalent to those countries. Both can be safely assumed for Canada. If, in addition, there is relatively free entry into and exit from production, resulting in prices equal to average cost, then rationalization is ensured.

Turning to empirical issues, the relevant literature can be roughly decomposed into factual and counterfactual analyses. Factual analyses referred to in this paper are principally the well-known work of Eastman and Stykolt (1967) and four much more recent papers by Baldwin and Gorecki (1983a,b,c,d).² Their results provide consistent and convincing evidence that Canadian production is inefficient in industries where (a) high tariffs limit the market size to Canadian consumption; and (b) the Canadian market is small relative to the minimum efficient scale needed to capture potential scale economies. The papers by Baldwin and

Gorecki are key insofar as they show that Canadian industry has indeed responded to trade liberalization by rationalizing into fewer products with longer production runs. Equally important, Baldwin and Gorecki document a sufficient degree of past entry and exit in Canadian manufacturing to justify a free-entry assumption in counterfactual analyses.

The principal counterfactual studies I will discuss are those of Wonnacott and Wonnacott (1967) and Harris (1984). Using partial equilibrium industry studies, the Wonnacotts claim sufficient inefficiency in Canadian manufacturing to suggest (for the tariffs relevant at the time) that free trade between the United States and Canada could increase Canadian real GNP by about 10 percent. This figure is significantly higher than the gains suggested by analyses using constant returns assumptions. Using more recent developments in general equilibrium simulation techniques, Harris interestingly arrives at numbers close to those of the Wonnacotts. The theoretical work summarized in this paper suggests that assumptions regarding free entry are probably very important to Harris's results. It is here that the work of Baldwin and Gorecki is valuable, in that it provides an empirical justification for Harris' entry assumptions.

I should note that several important issues are given only minor treatment here. First, analyses of multinationals, foreign ownership, and research and development are beyond the scope of this paper. Some of the most basic points to be made about foreign-owned firms can, however, be inferred from the general model. I have chosen to place these applications to foreign firms together in the section dealing with tariffs, trade liberalization and other extensions, rather than deal with them piecemeal throughout. Second, the theoretical discussions contained in the paper focus largely on the issue of free trade versus no trade (autarky) even though the empirical policy issue is clearly that of lowering existing tariffs. The reason is that tariff reduction complicates the conceptual issues by adding terms-of-trade and tariff-revenue effects. The final analytical section of the paper therefore combines the results of the theoretical analysis and the empirical review, to discuss the possible effects of trade liberalization. With a focus on Canada-U.S. trade, results suggest that scale economies significantly strengthen the case for bilateral free trade and weaken the case for unilateral free trade on the part of Canada. I argue that the assumptions needed to arrive at this finding fit well with the existing empirical evidence.

As a "bottom line," I therefore conclude that the case for significant gains from further trade liberalization, particularly bilaterally with the United States, is very strong. Available evidence also suggests that, contrary to the predictions of the "hewers of wood and drawers of water" group, there is no reason to believe that bilateral or multilateral trade liberalization will result in a contraction of the Canadian manufacturing sector.

The next four sections of the paper are somewhat technical and are designed for persons with training in economics. For readers who wish to avoid the technicalities, a short non-technical summary is presented in an appendix. The reader may then return to the body of the paper beginning with the section on factual empirical analyses.

The Gains-From-Trade Theorem

The traditional textbook version of the gains-from-trade theorem is illustrated in Figure 7-1. Two goods (X and Y) are produced in various combinations along the production possibility frontier \overline{YX} . Welfare is summarized by a set of community indifference curves.³ Autarky equilibrium occurs at point A in Figure 7-1 where a community indifference curve is tangent to the production frontier. Autarky welfare is given by U_a and the autarky price ratio by p_a .

Trade allows the country to gain by trading at some price ratio such as p^* shown in Figure 7-1. At p^* , the country produces at Q and consumes at C , realizing utility level U^* . Providing only that p^* differs from p_a , the country achieves strictly positive gains from trade. The worst possible outcome is that p_a and p^* are identical, implying that point A and utility level U_a in Figure 7-1 give both the autarky and free-trade equilibria. But even in this case, the country is obviously no worse off with free trade.

Several assumptions are needed if Figure 7-1 is to depict the situation accurately. First, factor markets must be competitive and distortion-free so that production does indeed take place on the production frontier. Nothing more will be said about this in the present paper. Second, producers must pick outputs such that prices are just tangent to the production frontier. Third, the production frontier must be concave to the origin, or in more conventional terminology, the set of feasible production points must be convex (the production frontier could be linear as in the Ricardian model of trade).

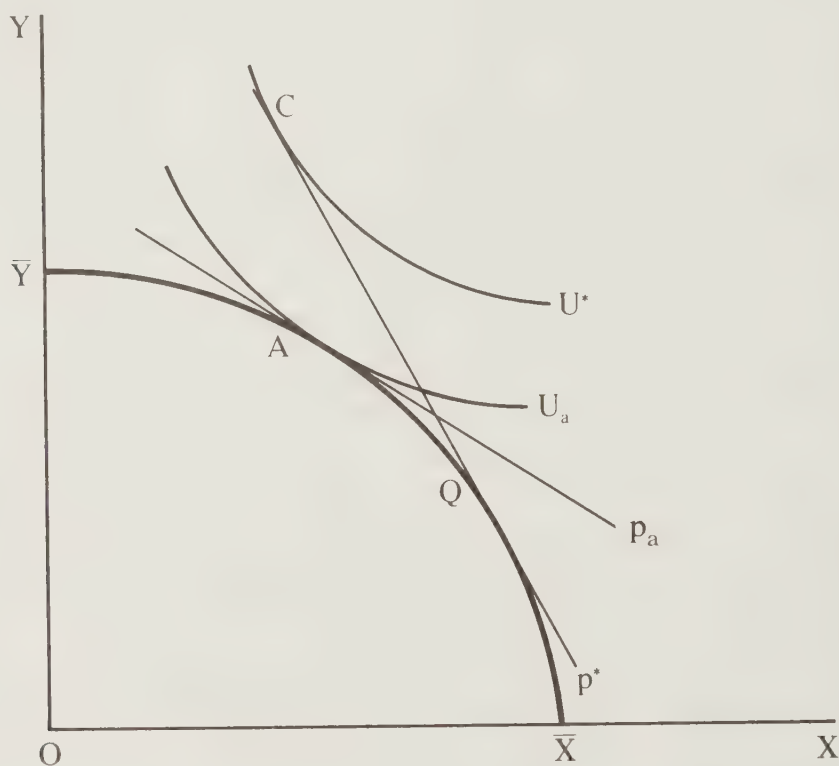
These last two assumptions are key to the result shown in Figure 7-1 and could be called the “tangency condition” and the “convexity condition,” respectively. If outputs are picked such that p^* is tangent to \overline{YX} , then the “budget line” p^* along which the country can trade passes to the northeast of A if the production set is convex as shown. Any consumption point chosen on p^* will then be revealed preferred to A in Figure 7-1 and gains from trade will occur.

If prices were tangent at Q but the production set was non-convex, as in Figure 7-2, p^* would pass below A and gains would not follow (such a tangency is generally not an equilibrium). Alternatively, if the production set is convex as in Figure 7-1 but world prices are not tangent to \overline{YX} , then a country could be worse off with free trade than with autarky.

It turns out that the tangency condition relates to economic pricing behaviour, while the convexity condition relates to the structure of

technology. It can be demonstrated that the slope of the production frontier shown in Figure 7-1 is simply the ratio of marginal costs in the two industries. Thus if each industry prices at marginal cost, the price ratio will equal the ratio of marginal costs and will therefore be tangent to the production frontier. The tangency condition will be satisfied by marginal-cost pricing. The production set will be convex and thus the convexity condition will be satisfied if there are non-increasing returns to scale in production. If there are constant returns in all industries, the production frontier can still be bowed out, as in Figure 7-1, due to differences in factor intensities between industries. This means that each factor is more useful in the production of certain goods than in others, leading to a sort of general-equilibrium diminishing returns that gives the production frontier a bowed-out shape.

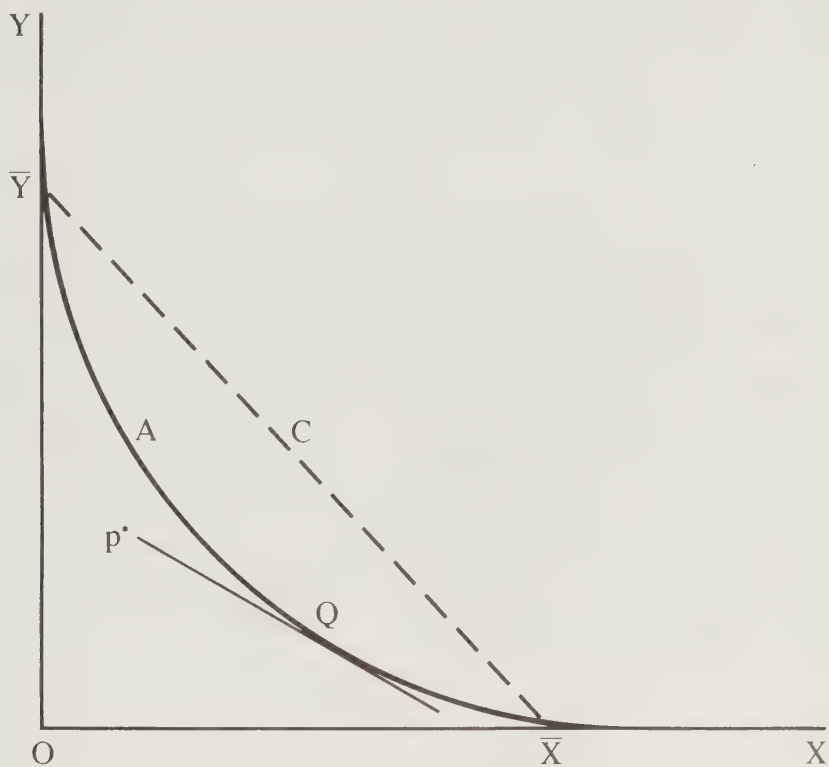
FIGURE 7-1



Neither the tangency condition nor the convexity condition will generally be satisfied when there are scale economies in production. Since marginal costs are less than average costs, prices of increasing-returns goods must exceed marginal costs if firms are to make non-negative profits. Scale economies may also imply that the production set is non-convex. The intuition behind this non-convexity can be seen by considering the cord connecting \bar{Y} and \bar{X} in Figure 7-2 (the dashed line). Assume that there are scale economies in both X and Y . While \bar{X} and \bar{Y} are feasible production points, the output $(\frac{1}{2}\bar{X}, \frac{1}{2}\bar{Y})$ given by point C in Figure 7-2 will not be feasible in the absence of factor intensity effects.

The reason is that producing $\frac{1}{2}X$ takes more than one-half of the resources needed to produce \bar{X} , due to scale economies, and similarly for $\frac{1}{2}\bar{Y}$. To produce at point C, we would therefore require total resources in excess of those needed to produce either \bar{X} or \bar{Y} , implying that C is not feasible (i.e., C lies outside the production possibilities frontier).

FIGURE 7-2



Gains from Trade with Increasing Returns to Scale

The general discussion of the previous section is not very useful if we are to understand exactly what underlying features of the economy determine the relationship between the trading and autarky equilibria. That is the purpose of this section, and to accomplish it I will outline a simple production model.

Suppose that there are only two goods (X and Y) produced from a single factor, labour (L), which is in fixed supply ($\bar{L} = L_x + L_y$). Assume further that Y is produced with constant returns to scale by a competitive industry so that units can be chosen such that $Y = L_y$. If Y is chosen as numeraire ($p_y = 1$), the wage rate in terms of Y will therefore also equal 1 and p will denote the price of X in terms of Y , with the cost of producing X simply given by L_x .

It is assumed that production of X requires an initial fixed cost, given by F , and then a constant marginal cost, m . The total cost or labour

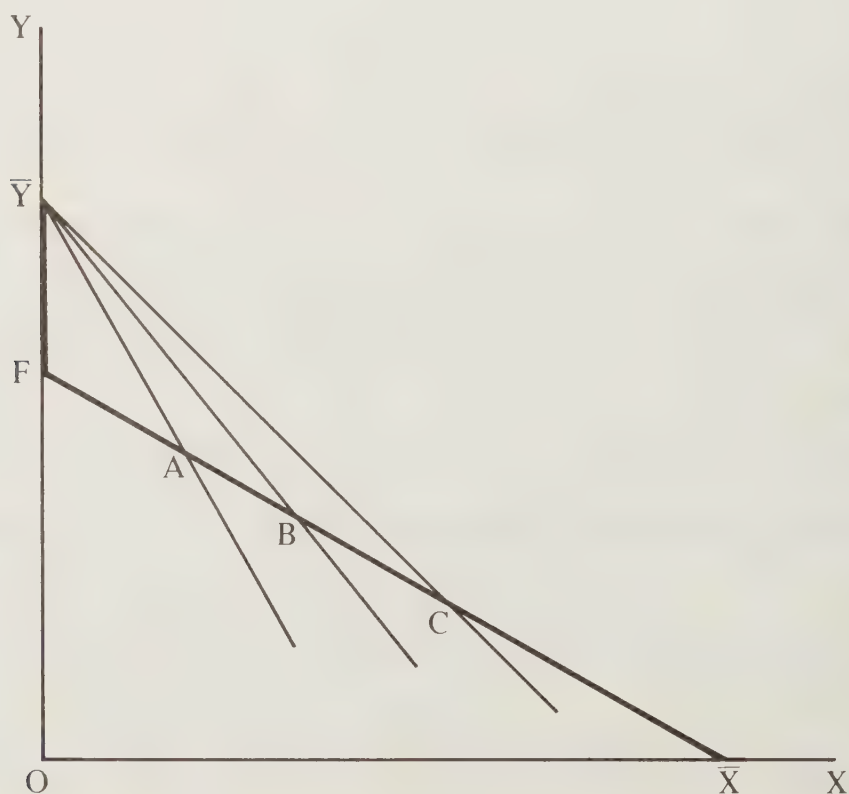
required to produce X is then $L_x = F + mX$. The production frontier for this economy is shown in Figure 7-3 as \overline{YFX} . $\overline{Y} = \overline{L}$ is the maximum output of Y when $X = 0$. To begin producing X , the fixed cost $\overline{Y}F$ must be invested before any output is realized. Thereafter, the constant marginal cost of producing X gives the linear segmented \overline{FX} which has a slope equal to m .

The average cost of producing X is just total cost (L_x) divided by output, or

$$AC_x = \frac{L_x}{X} = \frac{(\overline{L} - L_y)}{X} = \frac{(\overline{Y} - Y)}{X} \quad (1)$$

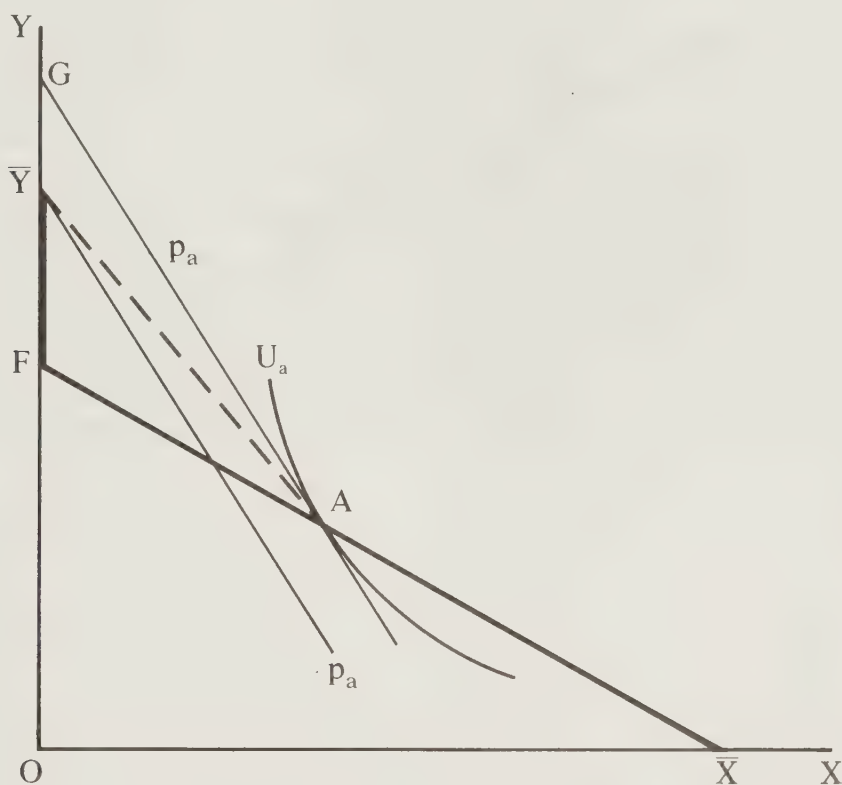
Consider points like A , B and C in Figure 7-3. Equation (1) shows, for example, that the average cost of producing the amount of X at A is simply the slope of the line passing through \overline{Y} and A . Similarly for B and C . From Figure 7-3, we see that the average cost of X is everywhere decreasing in the output of X or alternatively that production of X is characterized by increasing returns to scale. An important point for our purposes is that the equilibrium price ratio must cut the production frontier if positive X is produced. If production occurs at point B , for example, the price ratio p must be no less (flatter) than the average cost of X given by the slope of \overline{YB} .

FIGURE 7-3



An equilibrium with strictly positive profits for a monopoly X producer is shown in Figure 7-4, where the price ratio p_a through equilibrium point A is steeper than the average cost of X , given again by the slope of \overline{YA} . Point G in Figure 7-4 gives the GNP in terms of Y . GNP is composed of wage income in terms of Y ($O\overline{Y}$) and profits in terms of Y (\overline{YG}). The budget line of wage earners is given by a line with slope p through $\overline{Y} = \overline{L}$. Since wage earners' income is fixed at $\overline{Y} = \overline{L}$ in terms of Y , a decrease in p always increases wage earners' utility or real income (their budget line rotates around the fixed point \overline{Y}). Wage income equals GNP if profits are zero.

FIGURE 7-4



Figures 7-5 and 7-6 show two of many possible outcomes with trade. In each diagram, autarky equilibrium is denoted A , trading equilibrium production by Q , and trading equilibrium consumption by C . Autarky and trading price ratios are given by p_a and p^* , respectively, and U_a and U^* denote the corresponding welfare levels. In both cases, the equilibrium price ratio p^* is arbitrarily picked to be less than p_a . Profits for the X producer are lower in each case although this is not an inevitable outcome. Since $p^* < p_a$, wage earners are, however, better off in both cases for the reason noted above.

Figure 7-5 shows aggregate gains from trade while Figure 7-6 shows losses. In the former case, the gains in "consumers' surplus" to wage earners via a lower price of X exceeds the loss in "producers' surplus,"

FIGURE 7-5

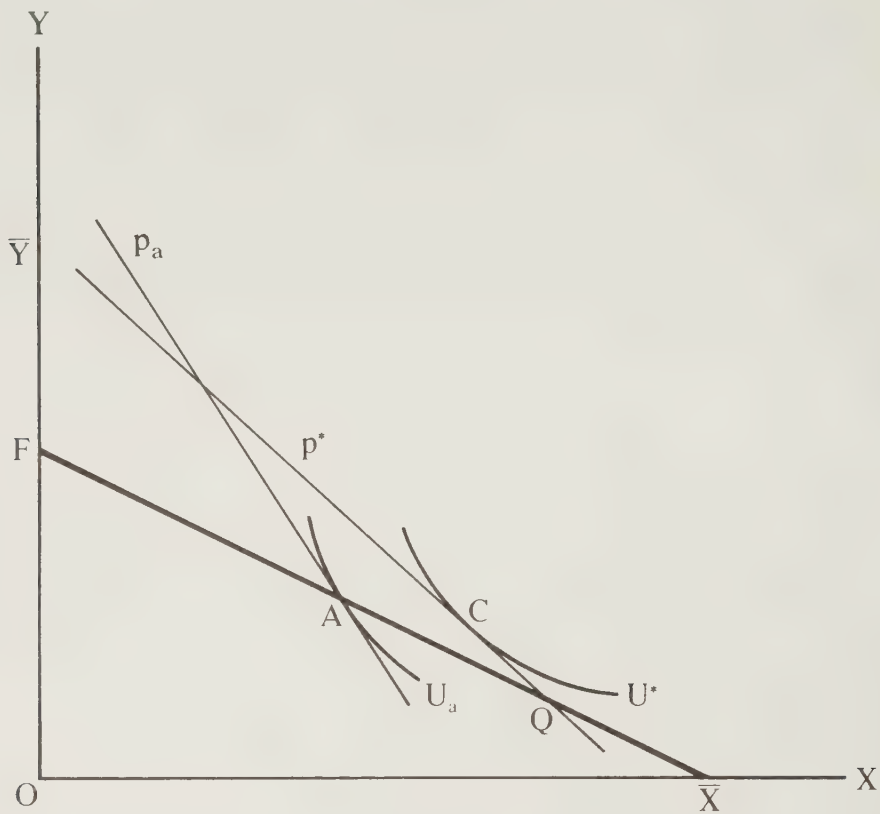
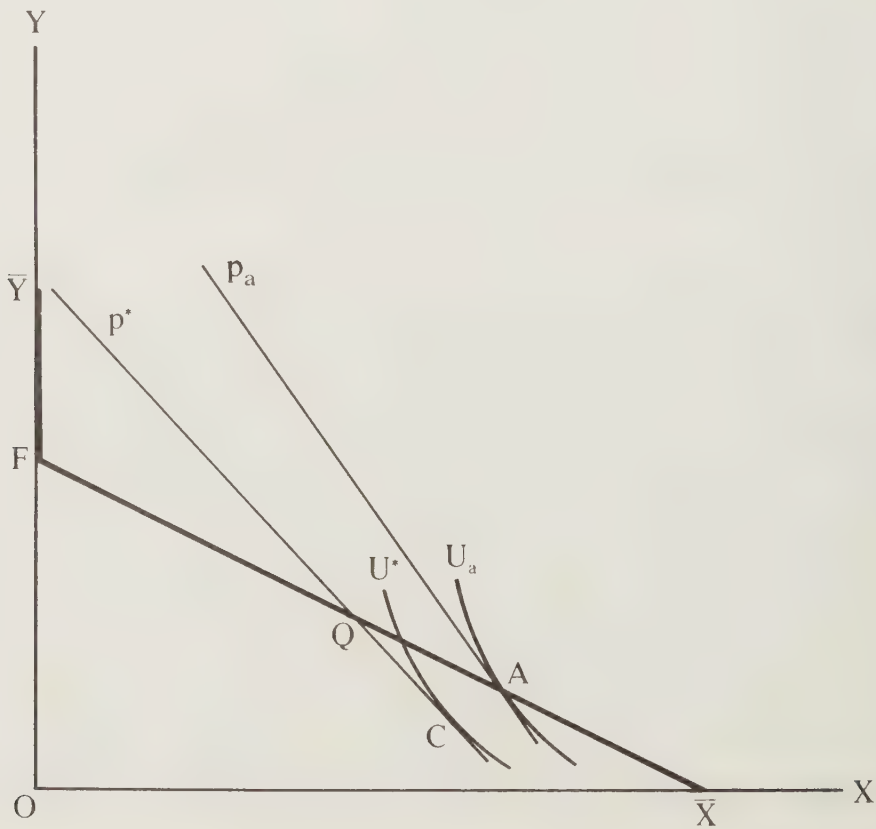


FIGURE 7-6



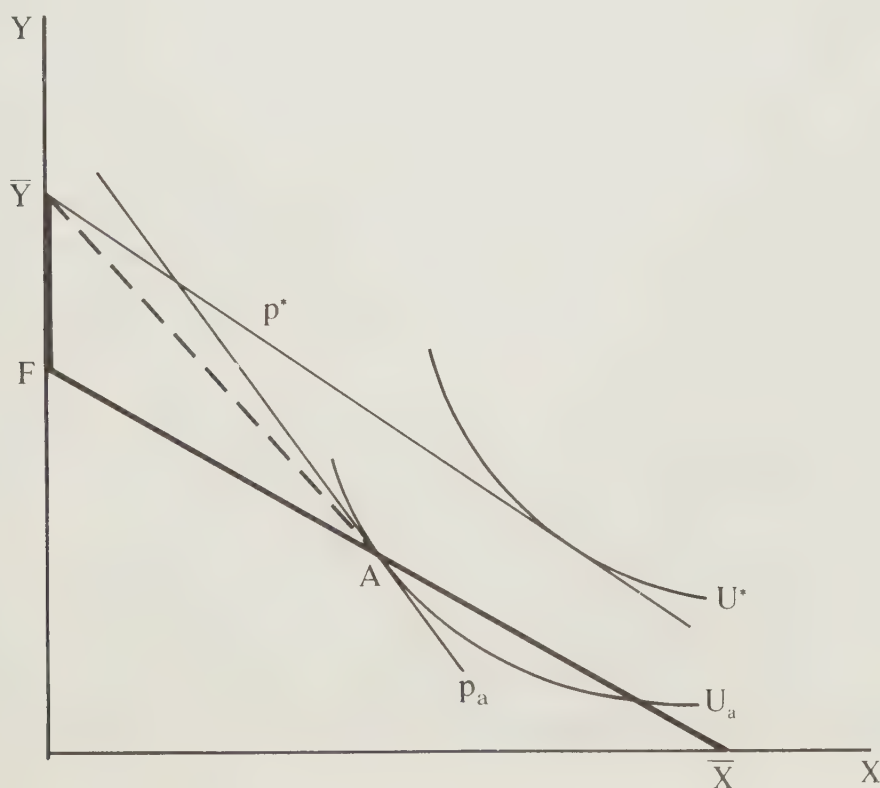
or more exactly monopoly profits. The opposite relationship holds in Figure 7-6.

The difference between Figures 7-5 and 7-6 lies in the effect of trade on the output of X . Trade leads to an increase in the output of X in Figure 7-5 (and also to exports of X , although this is not important to the argument). The reader can perhaps convince himself that since the price ratio cuts the production frontier as shown, an increase in the output of X necessarily means that the price line through Q must pass to the northeast of A . The consumption bundle C will be revealed preferred to A and gains from trade are unambiguously positive. This is the “production rationalization condition” referred to above: A sufficient condition for positive gains is that trade lead to increases in the output of goods produced with increasing returns.

If trade leads to a decrease in the output of X , the situation shown in Figure 7-6 could happen, meaning that gains from trade would be negative.

Figure 7-7 completes the discussion by noting what happens when trade entirely eliminates domestic production of X . Labelling remains as in Figures 7-5 and 7-6, except that a dashed line is added, giving the minimum price ratio (equal to average cost) at which the autarky output A could be produced. If no X is produced with trade, production is at \bar{Y} and consumption at a point like C along p^* . Note that if p^* is less (flatter) than the slope of the dashed average cost line, as shown in Figure 7-7,

FIGURE 7-7



then p^* passes to the northeast of A and gains from trade are positive. It is only if p^* exceeds (is steeper than) the average cost of producing the autarky output that losses could occur. This latter possibility could indeed be an equilibrium: market size could be such that if the domestic firm actually tried to produce output A , price would be driven below average cost. Thus no X is produced domestically even though p^* exceeds the average cost of producing certain output levels.

The results of Figures 7-5, 7-6, and 7-7 can be summarized as follows:

Proposition 1. A sufficient condition for gains from trade is that production is rationalized in the following sense. For every good produced with scale economies in the absence of trade, one of the following occurs:

- Trade leads to an expansion in the domestic output of the good.
- Domestic production is eliminated and replaced with a lower-cost import.

“Lower-cost” here is more rigorously defined as a price less than the average cost of production at the autarky output level. Markusen and Melvin (1984) show that this condition generalizes easily to situations with more complicated technologies, an arbitrary number of goods, and changes in the types of goods produced with and without trade.

To this point, the discussion has focussed on the possibilities of gains or losses from trade. Now let us begin to talk about probabilities and sizes of gains by showing four senses in which scale economies offer additional sources of gains beyond those resulting from comparative advantage (e.g., differences in factor endowments). Suppose first that we have two countries both of whose production frontiers are given by \overline{YFX} in Figure 7-4. Each country has a single monopoly producer of X in its initial autarky equilibrium at point A . In this case, it can be proved that unless the two producers can collude effectively, the opening of trade may induce each duopolist to expand his output. Depending on the form of behaviour adopted, the duopolists may each face a demand curve that is more elastic than the autarky demand curve, thus leading to the increase in output. This increased output is in turn sufficient for a welfare improvement, as noted above.

Elsewhere I have called this the “pro-competitive effect” of trade. It has its origins not in scale economies per se but in the imperfect competition associated with scale economies (Markusen, 1981).

Now consider a somewhat different situation in which both X and Y are produced with increasing returns, as in Figures 7-8 and 7-9. For the sake of illustration, suppose that both goods have identical production functions (F and m are the same for both goods) and that the consumers’ utility functions in a symmetric way. If both goods are produced by

FIGURE 7-8

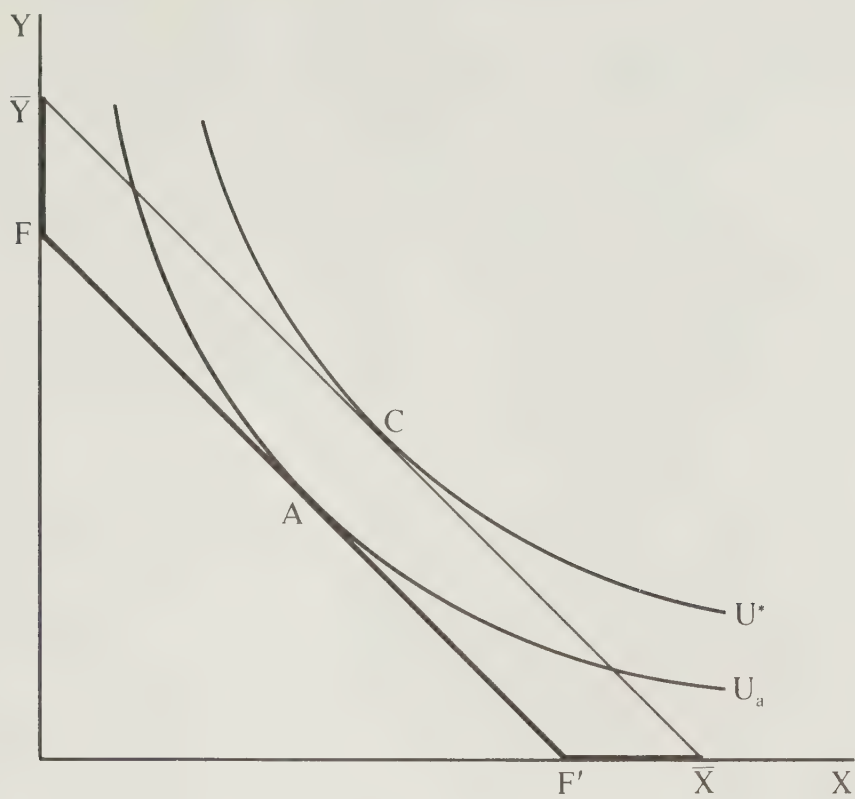
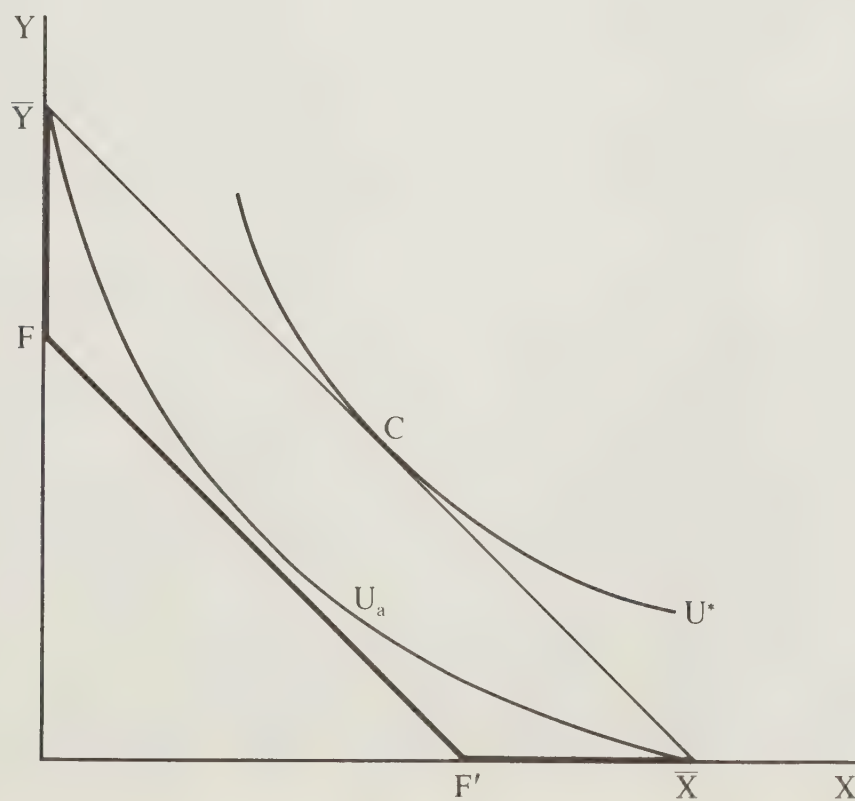


FIGURE 7-9



monopolists, they will have the same markup over marginal cost and hence sell for the same price due to the symmetry assumptions (Krugman, 1979).

Let $\overline{YFF'\overline{X}}$ be the identical production frontiers for two identical economies in Figures 7-8 and 7-9. The price ratio will equal the ratio of marginal costs (the slope of FF') due to the symmetry assumptions.

Two favourable outcomes are possible. First, as in Figure 7-8, both countries may produce both goods in autarky at point A . Both countries can gain if with trade each country produces only one good and sells half of the output for half of the other country's output. One country produces at \overline{Y} , the other at \overline{X} , and both consume at C . The countries gain by production rationalization.

Figure 7-9 shows a different autarky equilibrium due to the fact that fixed costs are greater. In this case, it may be possible to produce only one good in autarky (it is certainly welfare-maximizing to produce only one), thus leading to an autarky equilibrium at \overline{Y} or \overline{X} and a utility level U_a . With trade, each country can produce one of the goods and trade half of its output as before, leading again to consumption at C . In this case, average costs do not fall, but rather scale economies are taken in the form of increased product diversity, which is another source of welfare gains.

One final source of gains from trade which has been emphasized in the empirical literature has to do with the number of product lines per plant (Baldwin and Gorecki, 1983c; Harris, 1984). The idea is that small country firms may produce inefficiently many product lines per plant. Costs are incurred due to downtime as an assembly line is changed over from one product to another and/or due to the use of less specialized machinery, since the market is not large enough for the firm to incur the fixed costs of running several more specialized plants. Rationalizing effects of trade thus extend to the number of products produced per plant in addition to the length of production runs for individual products. These results may be summarized as follows:

Proposition 2. Scale economies offer potential gains from trade even to identical economies in four distinct senses:

- Trade may reduce oligopolistic markups by increasing competition, thereby leading to lower prices and average costs.
- Trade may rationalize production, with each country eliminating production of some goods and expanding outputs of others, again leading to lower prices and costs.
- Trade may lead to the introduction of new products, thereby leading to welfare gains from increased product diversity.
- Trade may rationalize the number of product lines produced in individual plants since the larger market allows firms to build more specialized plants.

In order to derive conditions under which these gains will be captured in practice, it is unfortunately necessary to place some restrictions on preferences. While homogeneous goods do not pose a problem, differentiated goods do in the sense that arbitrarily complicated degrees of substitutability are theoretically possible. Some restrictions on substitutability are needed for results. To avoid lengthy and unenlightening discussions, let me assert that all of the results in the next two sections can be demonstrated for a simple (but very restrictive) separable, quadratic utility function. In most cases, the same results hold for much more general functional forms. If the increasing returns sector produces two varieties (X and Y) and a constant returns sector produces a good Z , this utility function is, for example, given by

$$U^* = U(X) + U(Y) - V(XY) + Z \quad (2)$$

where $U(X)$ and $U(Y)$ are identical quadratic functions and $V(XY)$ is linear in XY . Large values for V' correspond to greater degrees of substitutability between X and Y . If we add more varieties, the results of the next section allow different pairs of goods to have different degrees of substitutability (e.g., the substitutability of two domestic varieties may differ from that of one domestic and one foreign variety), but $U(\cdot)$ is assumed to be the same for all goods. This last assumption restricts goods to being “horizontal” substitutes in the sense that if the average consumer can have only one of X or Y , he is indifferent between them. X and Y may be distinct, but they are of the same general quality. The role of this assumption will be mentioned from time to time.

Oligopoly

It is convenient and indeed important to distinguish two types of situations in relating underlying economic conditions to production rationalization as defined above. The first situation involves an oligopolistic market structure in which a small number of firms are not threatened by entry and may therefore earn positive profits in long-run equilibrium. This market structure will be the subject of this section, while the following section will consider free entry.

Figures 7-5 and 7-6 will be used to represent the possible outcomes. As before, Y is produced with constant returns by a competitive industry while there is a single monopoly producer of X in each of two countries. What trade does is increase the potential market size for each producer, thus leading to potentially higher profits. But trade also doubles the number of producers to two. Unless the firms collude, competition is thereby increased possibly leading to a lower price of X and lower monopoly profits.

Suppose that the two duopolists behave in a Cournot-Nash fashion, meaning that each firm views its rival's output as fixed when making its own output decision. This is a somewhat "passive" form of competition somewhere between collusion and predatory competition. In this situation, it can be rigorously demonstrated that the following proposition holds:

Proposition 3. Given the technology, preferences, and Cournot-Nash behaviour described above, a country will necessarily gain from trade (production of X will increase) if:

- (A) The country has an equal or larger number of producers per capita than its trading partner.
- (B) Domestic marginal production costs are not higher due to inferior technology.
- (C) Domestic marginal production costs are not higher due to a lack of some internationally immobile factor or other such cause.

Furthermore, the existence of horizontal product differentiation increases the likelihood of gains.

The intuition behind (A) can be seen from the case in which each country has a single producer but one country is smaller than the other. Trade doubles the number of producers but more than doubles the market size from the point of view of the small country's producer. That producer will find it in his interest to increase output, leading to gains from trade as in Figure 7-5. But being a small country is in fact overly sufficient. If each country has a number of firms proportional to its size (the autarky market shares of all firms are identical), then trade will lead each firm to increase its output. The technical reason for the result, as suggested in the preceding section, is that the larger market brought about by trade leads each producer to view his demand as being more elastic relative to autarky.

Conditions (B) and (C) are perhaps intuitive. If a firm has a higher marginal cost than its foreign rival, then it may reduce output in response to trade, leading to the situation shown in Figure 7-6. More technically, with Cournot-Nash behaviour, a firm's perceived marginal revenue is inversely related to its market share. Thus, in equilibrium where $MR = MC$, the high-marginal-cost firm must have a smaller market share. A high marginal cost here is a proxy for inferior technology or an inability to obtain some other input as cheaply as foreign firms. While inputs other than labour were not considered in the previous section, the same production frontier results if domestic labour and some other inputs (e.g., raw materials) are combined in fixed proportion to produce X . The marginal cost m is then composed of the labour cost and the materials cost in terms of Y . In any case, (B) and (C) are related to the two traditional determinants of comparative advantage: technology and

factor endowments. In an oligopolistic setting, a “comparative advantage” (lower m) in the increasing returns industries makes output expansion more likely.

The horizontal product differentiation assumed here means that products have different characteristics but that neither is unambiguously superior to the other (e.g., Porsches and Cadillacs are “horizontally” differentiated cars, while Porsches and Fords are “vertically” differentiated). When products are differentiated in our model, trade leads to two varieties instead of one being offered in each country. Under usual assumptions about consumer preferences, including the ones used here, this will increase the total demand for the product group in each country. If the products are horizontally differentiated, each duopolist will find his potential market larger with trade than with homogeneous products, thus making output expansion and gains from trade more likely. Vertical differentiation matters in the same way as differences in technology. That is, the country with the high m or low quality product is less likely to expand output. (The implications for consumer surplus are, however, quite different.)

All in all, there is little in Proposition 3 to scare Canadians, at least with respect to U.S.-Canadian free trade. Studies have consistently shown Canadian plants to be smaller on average than U.S. plants, from which I would guess that the data would also show more firms/plants per capita in Canada. Producers in both countries, by and large, have access to the same technologies, and few industries use internationally immobile (or costly to obtain) inputs. Those industries that do (e.g., processing primary products) are often industries for which these inputs are cheaper in Canada. Product differentiation exists but it is hard to measure exactly to what extent it is horizontal or vertical. Few would probably wish to argue that Canadian goods are systematically inferior to U.S. goods. If these points are roughly valid, then free trade with the United States, for example, is likely to generate a significantly beneficial pro-competitive impact on oligopolistic Canadian industry.

Free Entry and Average-Cost Pricing

The analysis of the preceding section assumed a fixed number of firms. There was no entry in response to trade (although firms could exit) and positive economic profits could exist both before and after trade. This section makes the opposite extreme assumption and assumes that firms always enter and/or exit until there are zero economic profits (all firms in an industry are assumed to be identical so that there are no inframarginal firms). Here, as in previous sections, each firm is assumed to produce only a single product. Additional gains from trade due to rationalizing the number of product lines per plant may be very important empirically, but such a discussion would contribute little additional understanding of the basic issues.

Two points should be made before proceeding. In preceding sections, the X industry was composed of a single firm (or a fixed number of identical firms) so that we treated firms and industries as the same thing. But strictly speaking, the production rationalization condition presented in Proposition 1 above applies at the firm level, not the industry level. While firm and industry outputs move in the same direction in all models with entry constructed to date (i.e., industry output expands partly by entry, partly by increasing firm output), Figures 7-3 through 7-9 developed in the section on gains from trade with increasing returns to scale can now no longer be used if X is interpreted as industry output. If X is total industry output, the production frontier shifts downward by F with every new entrant, as an additional fixed cost is incurred. Thus, X in Figures 7-3 through 7-9 should now be taken to refer to a single firm for some fixed allocation of L to be divided between X and Y (i.e., the diagrams are a subspace or slice through a multi-dimensional production set).

The second point concerns the meaning of free entry. By free entry I mean that there are no such things as capital market imperfections, unequal technical knowledge, patents that limit access to technology, or scarce resources that place potential new firms at a disadvantage. If these conditions hold within a country, we will say that there is domestic free entry. A much stronger assumption is that these conditions hold across countries.

Perhaps the most important modification that domestic free entry brings is that a positive profit equilibrium like that shown in Figure 7-4 cannot exist. If A is the equilibrium autarky output, then the equilibrium price must coincide with the dashed line through A . The consequence of this is that the situation shown in Figure 7-6 is ruled out. Instead, the equilibrium price line will always rotate around \bar{Y} . A fall in p ($p^* < p_a$) will mean that either production of X increases (the firm must be moving down its average cost curve) or production is eliminated by trade. But in the latter case, the good will now be selling for a price (p^*) lower than its average cost of production in autarky ($p_a = AC_x$). Thus a fall in price due to trade necessarily means that the production rationalization condition is satisfied.

This condition does run into one complication, which is how to evaluate a situation in which a good disappears after trade. This is a distinct possibility with product differentiation in which trade, for example, leads to the replacement of one all-purpose variety of a product by two more-specialized varieties. The technical answer for the preference function discussed above is that the condition will continue to be satisfied if, after trade, a new horizontal substitute is made available at the same or lower cost to the product that has disappeared.

To say that a fall in the price of each increasing-returns good (or class of horizontal substitutes) is a sufficient condition for gains is once again

not to say that it will occur in response to trade. There exist no sweeping proofs on this matter, and I believe that it is in the nature of the problem that none will be forthcoming. What we can say is that a significantly stronger (i.e., less restrictive) version of Proposition 3 holds if there is domestic free entry.

Proposition 4. Given the technology, preferences, Cournot-Nash behaviour, and domestic free entry described above, trade will rationalize production and lead to unambiguous gains from trade.

In particular, note that with domestic free entry, it is no longer important that domestic producers have technical or cost parity. It should be noted, however, that if a country has a significant technical disadvantage in the production of some homogeneous good, then production will be eliminated by trade, which is of course a concern of policy analysis. But the corresponding price fall will ensure that the rationalization condition is satisfied and hence that welfare increases. Some small degree of horizontal product differentiation turns out to be sufficient in this model for a domestic firm's output to expand despite a cost disadvantage. Cost disadvantages lead to decreases in the number of domestic firms but not in the outputs of surviving firms, thereby satisfying rationalization.

The intuition behind Proposition 4 can be seen by considering the homogeneous goods case. Suppose that we double the market size by combining two identical countries. Each firm could continue to produce its autarky output at the same price, thereby maintaining the zero-profit condition. But this is not a Cournot-Nash equilibrium since each producer will now perceive his demand as more elastic. Each producer will increase output, the price will fall, and some producers will be eliminated. Production is thereby rationalized. Combining the two identical economies leads to the elimination of some producers, with each surviving firm producing a larger output. For the preferences assumed above, this result also holds for horizontally differentiated products, differing degrees of substitutability among pairs of products, and cost/technology differences among firms.

The perceived elasticity effect connected with Cournot-Nash behaviour also means that autarky outputs of firms will be smaller in a relatively smaller country. For a given degree of scale economies, smallness means fewer firms with free entry, a firm perception of inelastic demands, higher markups, and lower firm outputs. Free-trade firm outputs depend on free-trade market size. Output expansion by surviving firms therefore tends to be larger in the small country. This increases the likelihood and size of gains and is of obvious relevance to Canada.

Before concluding, something should be said about the role of the horizontal product differentiation assumption. I think it is fair to say that we understand very little about vertical or quality differentiated goods.

What appears to be the case from my research is that a country producing a high-quality, high-cost good could be made worse off by trade if its product is eliminated and replaced by a low-cost, low-quality foreign substitute which offers less consumer surplus. Analysis of this type of problem is so preliminary that it is perhaps best to state simply that the horizontal differentiation restriction used here is sufficient for all our results but may turn out to be completely unnecessary.

In summary, Propositions 3 and 4 seem encouraging in that the conditions needed to rule out losses from trade do not seem improbable. Restrictive assumptions are used to generate the results, but this should not be confused with patently unrealistic assumptions. Remember also that in all cases the restrictive assumptions are sufficient for the results but never necessary. In any case, we can sum up this and the previous section by offering the following summary statement.

Proposition 5. Perverse welfare effects due to trade are less likely if:

- There is free entry into and exit from domestic industry.
- Domestic products and foreign substitutes are homogeneous or horizontally differentiated products.
- Countries have access to the same technology in increasing returns industries.
- There are few internationally immobile resources needed to produce the increasing returns goods.
- The domestic economy is small relative to its major trading partners.

Factual Empirical Analyses

The extensive literature on Canadian protection and trade liberalization can be somewhat arbitrarily divided into what I will call “factual” and “counterfactual” analyses. By factual analyses, I mean studies that are primarily interested in explaining what is the case today and what has occurred in the past. By counterfactual analyses, I mean studies that are primarily interested in what will or might happen in response to some policy change such as lowering trade barriers. Counterfactual analyses are, of course, built on results of extensive factual studies to the point where these studies occupy 90 percent of the researchers’ time and publication pages. But I find it useful to classify studies according to intent, and hence a study which asks counterfactual questions will be so classified.

In this section I will review some factual empirical analyses. The literature is very extensive, and since we are interested here in the scale economies/imperfect competition aspect of trade liberalization, I will limit the discussion to studies that address these specific questions. Furthermore, rather than provide an extensive but completely super-

ficial literature review, I will make reference to only two important studies, that of Eastman and Stykolt (1967) (henceforth ES) and a new set of working papers by Baldwin and Gorecki (1983a,b,c,d) (henceforth BG). The former is chosen because it is viewed as a landmark study in the development of Canadian open-economy industrial-organization analysis. The BG papers are chosen because (a) they are up to date and the authors are able to analyze the effects of trade liberalization during the 1970s; and (b) they use a far richer data set than has ever been available to Canadian researchers. As noted in note 2, the BG papers tend to eclipse most of the earlier papers and monographs on trade liberalization.

Eastman and Stykolt (1967)

Eastman and Stykolt had two purposes in conducting their study. First, they wanted to study the degree of industrial inefficiency in Canada, especially its relationship to tariff protection. Second, they wanted to explain the varying degrees of foreign ownership across manufacturing industries. While my comments will be limited to the industrial efficiency analysis, any researcher interested in the multinational enterprise would be well advised to study ES's analysis of foreign ownership. More specifically, ES conducted a study of 16 manufacturing industries in order to document the degree to which Canadian plants were of inefficiently small scale. ES were careful to avoid speculation on counterfactual questions such as whether or not each industry would respond to tariff reduction by rationalizing, or perhaps by disappearing. They viewed this as an issue of comparative advantage about which they were able to say very little. This is perhaps one point at which the modern theory differs from ES, in that we now think of much of the manufacturing trade as non-comparative-advantage trade. As in the model developed above, such trade can arise due to the existence of scale economies, imperfect competition, and product differentiation per se rather than as a consequence of some pattern of comparative advantage.

In any case, the authors develop what is often referred to as the Eastman-Stykolt hypothesis (there are actually two hypotheses, the second relating to foreign ownership). This hypothesis states that Canadian plants are of inefficiently small size in high tariff/high concentration industries. Concentration in Canadian production shouldn't matter in the absence of tariffs, since the effective market size is much larger than the Canadian market. Similarly, high tariffs without concentration should mean that there is sufficient domestic competition to ensure efficient scale. Tariffs inefficiently raise industry outputs in protected industries, but should not cause inefficiency at the plant level per se.

This hypothesis is perfectly consistent with the Cournot-Nash model used above. Recall that in that model, an increase in market size (for a given level of scale economies) results in an increase in firm output and a

less-than-proportional increase in the number of firms. Thus concentration falls and the firms become more efficient as the market grows in relation to minimum efficient scale (MES).

It should be emphasized that the ES hypothesis is by no means a tautology, or alternatively, the model developed above is by no means the only plausible specification. If even large numbers of firms (e.g., more than five) can and do effectively collude, then concentration may not fall and firm output may not increase in response to increased market size. Conversely, if entry is easy and potential competitors are ready to jump in at a hint of profits (currently known as the “contestable markets hypothesis”), then production could be efficient for a market only able to support one firm.

The results of ES’s 16-industry sample strongly confirm their hypothesis. Market size relative to MES was a strong and always statistically significant determinant of suboptimal production. Absolute capital requirements (suggesting capital market imperfections) and product differentiation added some explanatory power, but market size was by far the most important variable. While this finding by itself does not allow us to draw any strong counterfactual inferences about tariff reduction, it does support the use of models such as the one presented above and that used by Harris (discussed below), in that these models “predict” the ES cross-section results.

Baldwin and Gorecki

A recent series of paper by Baldwin and Gorecki have continued in the tradition of Eastman and Stykolt, but broadened the discussion from an analysis of plant scale to include product diversity, length of production runs, and entry and exit as well. BG have a tremendous advantage over other recent studies such as that of Caves et al. (1980) in that they use a comprehensive Statistics Canada data set covering 167 manufacturing industries producing some 6,000 products. Using this data set, they are also able to present statistics for 1970 and 1979, allowing for an actual observation on structural change.

The years 1970 to 1979 are of interest in the BG report in that average Canadian tariffs fell by 30 percent from 1966 to 1978. The data from 1970 and 1979 thus allow for one observation on the actual (as opposed to counterfactual) effects of tariff reduction on plant size, product diversity, total numbers of firms, and so forth.

BG report that over the 1970–79 period, exports and imports measured as a percent of domestic trade both increased by about 20 to 25 percent. The fact that both exports and imports increased as a consequence of multilateral tariff reduction clearly suggests that the manufacturing sector cannot be classified as either export oriented or import competing. The positive response of both imports and exports of manufactured

goods is consistent with production rationalization (domestic production of some products is eliminated while production and export of other products increase), with the differentiated product version of the model developed above, and with monopolistic competition models such as those of Krugman (1979), Helpman (1981), and Lancaster (1980).

BG report that the average size of larger Canadian plants was small relative to larger U.S. plants, but that Canadian plant size increased by about 33 percent between 1970 and 1979. As with the above results concerning the volume of trade, this plant-scale increase is consistent with the predictions of the models just mentioned, and also with the oligopoly model presented here and in Markusen (1981). (However, this result is also consistent with scale-increasing technical change. Such technical changes are difficult to measure and hold constant, and BG make no attempt to do so.)

A third important statistic presented in BG is that the manufacturing sector experienced a sizable amount of entry and exit between 1970 and 1979. Of an industry's total sales in 1979, on average 14 percent were accounted for by firms which entered after 1970 by building a new plant. If takeovers of existing plants of other firms are also counted as entry, then 16.2 percent of sales in 1979 were by post-1970 entrants. Firms that exited before 1979 by scrapping plants accounted for 25 percent of 1970 sales, and all firms that exited, either through plant scrapping or divestiture, accounted for 30 percent. To me, this suggests a sufficient amount of entry and exit to justify the use of a free-entry model in preference to a no-entry oligopoly model as discussed above.

Using a multiple regression analysis of the data, BG showed a strong confirmation of the ES results. High tariff/high concentration industries were significantly less efficient (below MES) than other industries. Using the intertemporal comparison of 1970 versus 1979, they also showed that increases in market size have led to an increase in relative plant size. Perhaps more to the point, they found that tariff reductions resulted in plant scale increases in high tariff/high concentration industries. Rationalization rather than disappearance seemed to be the result of trade liberalization.

In the latter two papers (1983c,d), BG present an analysis of the nexus among tariffs, plant size, length of production runs, and product diversity at the plant level. Here they found an Eastman-Stykolt type effect with respect to product diversity and length of production runs to reinforce the result on plant size: in industries with high tariffs/high concentration, production runs were shorter and product diversity higher for a given size plant than elsewhere in the manufacturing sector. Over the period 1974 (the first year with data on a product basis) to 1979, they also found that the length of production runs increased and product diversity at the plant level decreased.

In summary, the extensive data set of BG confirmed that in industries with high tariffs and a domestic market which was small relative to minimum efficient scale, the plant size, length of production runs, and product diversity were all significantly inefficient. Perhaps more important, their intertemporal comparison suggests that tariff reduction has led to significant rationalization without leading to a decrease in the size of the manufacturing sector. Indeed, exports of manufactured goods as a percentage of total domestic trade increased as much as imports over 1970–79. The volume of entry into and exit from manufacturing also showed no evidence to support an assumption of significant barriers to entry. Taken together, the BG results suggest to me that the assumptions of the free-entry model presented above and the much more complicated counterfactual analysis of Harris discussed below are broadly consistent with the factual situation.

Counterfactual Empirical Studies

In this section I will comment on the counterfactual analyses of Wonnacott and Wonnacott (1967) and Harris (1984). The former is chosen because, like Eastman and Stykolt, it was a landmark study that refocussed attention on new issues. Harris's study is chosen because it represents a quantum jump in technique, combining industrial organization theory with general-equilibrium computational techniques in a way that has never been done before. Both studies are labelled counterfactual in that they are interested in the effects of moving to free trade.

Wonnacott and Wonnacott (1967)

Paul and Ronald Wonnacott (henceforth WW) were concerned with analyzing the potential economic effect on the Canadian economy of a bilateral free-trade agreement with the United States. Their analysis was conducted in partial-equilibrium terms using money prices and wage rates, but they discussed in some detail exactly how wage rates and the value of the Canadian dollar might respond to trade liberalization. WW were well aware of the importance of these effects, but before the advent of general-equilibrium simulation techniques it was simply not possible to offer any precise estimates.

In assessing the impact of bilateral free trade, WW used two approaches. The first evaluated on a general basis the various forces which cause a firm to choose a particular location. The question was one of industrial location on a free-trade continent, and regions were compared on the basis of wages, transport, capital, resource and tax costs, and also with respect to less quantifiable aspects such as external and agglomeration economies. Their conclusion was that the industrial regions in Ontario and Quebec have a noticeable advantage over adja-

cent U.S. regions, the latter comprising much of the U.S. industrial heartland.

While of great interest and relevance at the time, their specific findings would be highly debatable today. The centre of North American population, for example, has shifted toward the south and west. Similarly, the decline in importance of North American heavy industry and improvements in telecommunications probably mean that central locations are now of lesser importance. Nevertheless, the methodology is sound and it would be interesting to see it re-applied today.

WW's second approach is an industrial-organization approach addressing the types of issues that we are interested in here. Industry studies were undertaken in order to assess inefficiencies introduced by protection. First, a direct effect was calculated for each industry, which was the amount by which prices were increased by the tariff (not necessarily equal to the full amount of the tariff) minus the effect of other tariffs in increasing input costs. The direct effect is therefore much like a rate of effective protection. Second, a "basic input-cost differential" was calculated, which was the positive advantage of the lower Canadian wage rate minus any disadvantages (e.g., taxes). These two were added together to give a total residual. It was apparently assumed that excess profits were not being earned, so that this residual was a production or cost inefficiency.

In a somewhat arguable step, WW viewed the residual efficiency gap as being due to the diseconomies of small scale production. Since production and/or cost functions were not directly estimated, there was no way to test this scale economies hypothesis against competing hypotheses such as an inferior-technology or inferior-management hypothesis. By assuming that the efficiency gap was due to inefficient scale, WW calculated that bilateral free trade could raise manufacturing wages by 30 percent, thereby contributing in a major way to a 10 percent increase in real GNP.

In any case, WW's imputation of the efficiency gap to small scale in production has certainly stood the test of time and been repeatedly confirmed in estimations of cost and production functions by later researchers.⁴ But perhaps more to the point, WW refocussed the debate in a number of ways. First, they emphasized the role of scale economies as a determinant of the gains from trade, something that was rarely done by most international trade economists. Second, and closely related, they emphasized that current production costs could not be taken as evidence of a Canadian comparative disadvantage in manufacturing, since these costs reflect small scale production caused by the tariff. Some confusion over this point persists to this day. Third, they noted the role of tariffs in raising input prices and hence costs, an early policy application of the then developing notion of effective protection. Fourth, they emphasized the role of the foreign tariff in determining Canadian

manufacturing efficiency. Neoclassical trade theorists could easily forget this by viewing the manufacturing sector as import competing. In this view, either unilateral or bilateral free trade would shift resources out of the import-competing manufacturing sector. By taking the industrial organization view, WW noted the great difference between unilateral and bilateral free trade, emphasizing that increased market size resulting from the latter should lead to an expansion in the manufacturing sector.

This shift in emphasis from the domestic to the foreign tariff is one of the really key contributions of WW. For perhaps the first time, the relationship between industrial efficiency and gaining access to wider markets was carefully developed. The focus of the efficiency debate was, in my opinion, correctly shifted from the Canadian market to the larger North American market.

Harris (1984)

The purpose of Harris's study was to examine the empirical case for free trade and to do so by introducing a new methodology for the empirical investigation. The study has already attracted wide attention both because of its novel methodology and because it arrives at the relatively large welfare gain from multilateral free trade of about 10 percent of GNP. The methodology combines the best features of the traditional general-equilibrium trade approach with those of the partial-equilibrium industrial organization approach. Specifically, the model used is a computational general-equilibrium model, but unlike other such models, it allows for scale economies at the firm level. The addition of scale economies to the general-equilibrium model allows Harris to pick up the four non-comparative-advantage sources of gains from trade listed in Proposition 2 above: gains due to (a) lower oligopolistic markups; (b) pure efficiency gains due to lower average production costs; (c) increased product diversity, and (d) rationalizing the number of products produced per plant. These sources of gains are explicitly excluded by the more traditional perfect competition/constant returns models.

At the same time, Harris's study is a great improvement over the traditional partial-equilibrium industrial organization approach. The general-equilibrium calculations allow wage rates, etc., to change, thereby picking up important intersectoral shifts that can only be guessed at with partial-equilibrium analysis.

Harris's analysis is therefore in principle a vast methodological improvement on others. But specific choices still need to be made in actually specifying the model. From the above sections, we know that assumptions regarding pricing strategy, entry, product differentiation and technology will be important. The purpose of this section is to review Harris's actual choice of assumptions and offer comments as to

how they affect the results. I will conclude by offering some comments as to the empirical justification of these assumptions.

Technology

Cost functions in manufacturing industries consist of fixed costs plus constant (at constant factor prices) marginal costs. Labour and capital are the only primary inputs, which are combined with intermediate inputs to produce final outputs. Domestic and foreign products are assumed to be imperfect substitutes as intermediate inputs. There is no modelling of foreign production (Canada faces foreign excess supply and demand functions) so that there is no assumption of technological parity.

The cost functions thus give us generalized production frontiers which closely resemble those of Figures 7-3 through 7-9, which is one reason I picked the fixed cost/constant marginal cost representation. Such cost functions have been widely used in the empirical industrial organization literature and I can find nothing to object to here. I should, however, point out that there is some disagreement over the size of scale economies estimates. Whalley (1984) has recently covered this discussion and I have nothing to add.

Pricing Behaviour

Two pricing hypotheses are considered for the imperfectly competitive firm. The first is a monopolistically competitive pricing hypothesis closely related to the Cournot-Nash assumption used above. As noted above, this model gives a pro-competitive response to increases in market size due, for example, to foreign tariff reduction. The other hypothesis is referred to by Harris as the “Eastman-Stykolt hypothesis,” and assumes that domestic producers set their prices to equal the tariff-inclusive prices of foreign substitutes. This is a more collusive pricing assumption in that the domestic mark-up does not decrease with additional domestic firms. It also means that domestic tariff reduction has a stronger competitive effect than with monopolistically competitive pricing because under the ES hypothesis domestic prices must fall by the full amount of the tariff cut, thereby forcing significant rationalization.

Harris uses a weighted average of the two pricing hypotheses in his actual estimations, and sensitivity analysis shows that more weight given to the Eastman-Stykolt hypothesis yields larger welfare gains from tariff reduction. I am not entirely comfortable with the Eastman-Stykolt hypothesis nor, as a matter of interest, do I believe that it was proposed by Eastman and Stykolt.

Entry

It is assumed that entry occurs in manufacturing industries until profits are eliminated, or price equals average cost. It should be pointed out that there are many price-equals-average-cost equilibria, each correspond-

ing to a different pricing hypothesis. Thus average-cost pricing does not in any sense imply efficiency, or more precisely the degree of inefficiency depends upon the degree of competition in post-entry pricing. The importance of free entry is partly from an exit point of view. If profits are initially zero in an industry, then we cannot get perverse responses to tariff reductions such as the one shown in Figure 7-6 above, where average cost increases as a consequence of a price fall. With profits initially zero, a decrease in prices following tariff reduction forces rationalization. It is my suspicion that the free entry assumption may therefore be contributing in a significant way to Harris's impressive figures for the welfare gains from free trade.

Product Differentiation

The assumption that domestic and foreign goods are imperfect substitutes both as inputs into production and from the point of view of the consumers is necessary to make the model computationally feasible. But the assumption may also increase the size of measured welfare gains and the size of the manufacturing sector after free trade. Cost disadvantages (other than scale) of domestic producers matter less when domestic products are imperfect substitutes for foreign goods, and hence the downside risk of free trade for such industries is less. Product differentiation also means that trade leads to an increase in product diversity valued by consumers, and so total demand for manufactured goods rises at constant prices. Thus the pie to be divided becomes larger, meaning the size of the domestic manufacturing sector is more likely to increase. On the other hand, if products are poor substitutes (highly differentiated), then the pro-competitive effects of free trade are weaker. Product differentiation then reduces the gains from trade. In Harris's calculations, the latter effect dominates such that reported gains are less than would be calculated if products were assumed to be perfect substitutes.

Factor Supply

Capital is assumed to be in perfectly elastic supply at a world rental rate and labour is the only other primary factor. This means that there are no sector-specific factors which would inhibit the growth or contraction of industries in response to trade liberalization. Alternatively, sector-specific factors tend to make marginal cost functions slope upward after some point, giving the textbook U-shaped average-cost function.

Import Supply

Imports are in perfectly elastic supply at fixed world prices. It seems to me that this assumption increases the gains from unilateral tariff reduction or the domestic tariff reduction half of bilateral tariff reduction. Domestic prices of imports fall by the full amount of the domestic tariff

cut, generating both a large consumer surplus gain and a large rationalization impact on domestic industry.

In the above points, I have indicated the assumptions that may contribute to the large gain of 10 percent that Harris calculates would result in long-run equilibrium from multilateral free trade. Other than the issue of the size of scale economies, about which I know little (see Whalley, 1984), it is my reading of the empirical literature that these assumptions are generally well justified. The type of technology used has long been established as empirically valid for manufacturing industries. While I am not entirely comfortable with the so-called Eastman-Stykolt pricing hypothesis, consistent and highly significant regression results linking inefficient scale to market size tell me that Harris's pricing hypotheses are certainly qualitatively correct. Similarly, actual entry and exit over the 1970s justifies the free-entry assumption. Both points are well-documented by Baldwin and Gorecki in particular.

The issue of product differentiation is somewhat more difficult. What I do believe is that an assumption of no product differentiation would clearly be counterfactual. Homogeneity would imply no two-way trade in a given manufacturing industry and virtually no inefficiency in domestic import-competing production (if imports are indeed in perfectly elastic supply). Both results do not fit the facts.

Lastly, the assumptions of no sector-specific factors such as entrepreneurship, specific human and physical capital, etc., are probably reasonable in a long-run equilibrium model, which is after all what the model is. Most of these factors can be transformed in the long run, though they most certainly matter with respect to adjustment costs. Factors that cannot be so transformed include natural resources. But these factors tilt the balance in Canada's favour, possibly leading to an underestimation of output gains in industries using these inputs intensively.

Tariffs, Trade Liberalization and Other Extensions

The purpose of this section is to consider briefly the consequences of relaxing some of the important simplifying assumptions used in the previous sections. These assumptions were used in order to explain clearly the relevant points of theory and no claim was made that they were the most empirically plausible assumptions. Given this theoretical basis together with the empirical results of the previous two sections, it is, however, possible to offer some intelligent conjectures as to how the results might be modified in alternative situations.

Tariffs and Trade Liberalization

The theoretical discussion above considered no trade (autarky) versus free trade, even though the empirical policy issue is clearly that of lowering existing trade barriers. The reason for this choice of exposition is that tariff reduction simply complicates the discussion by adding terms-of-trade and tariff-revenue effects. These effects contribute little to an understanding of scale economies and are in any case well understood in their own right. Having said this, it is nevertheless true that scale economies do have important implications for the question of trade liberalization. I would argue that scale economies probably strengthen the case for bilateral tariff reduction between the United States and Canada and weaken the case of unilateral tariff reduction by Canada.

The most important point to note is that if products are differentiated and/or minimum efficient scales of production are large relative to the North American market, then Canada is not a small open economy. In the relevant industries, perceived demand curves will be downward sloping and firms will price in excess of marginal costs. World prices for some goods will be affected by Canadian tariffs. The traditional assumption that Canada might gain from unilateral tariff reduction relies on Canada being a price taker in all markets. This assumption is not valid in a world of scale economies and product differentiation. Thus there can be no presumption that unilateral tariff reduction will be welfare improving. (Such a gain is not of course ruled out and I should note that Harris, 1984, does calculate a welfare gain from unilateral tariff reduction.)

More specifically, unilateral tariff reduction in the two-good oligopoly case results in the welfare-reducing situation shown in Figure 7-6 above. Let A and p_a denote the restricted trade output point and price ratio respectively and let Q and p^* denote the corresponding values for unilateral free trade (indifference curves should be ignored). Under the various assumptions discussed in the oligopoly section, unilateral free trade reduces the domestic firm's output and market share, leading to welfare losses as in Figure 7-6 (the fall in p does, however, lead to an increase in the real wage). Unilateral tariff reduction means that the domestic firm loses part of the domestic market to its foreign competitor but conversely does not gain in the foreign market.

The foreign tariff, on the other hand, becomes more important with scale economies, as emphasized by the Wonnacotts. A lowering of the foreign tariff, in addition to creating the usual terms-of-trade improvement, tends to rationalize production in the domestic returns-to-scale industries. For the oligopoly case, I can show that the situation shown in Figure 7-5 must occur in response to equiproportionate bilateral tariff reduction if the domestic economy (a) is equal in size or smaller than its trading partner and (b) possesses technology roughly equivalent to its trading partner. For the Canada-U.S. case, I thus believe that scale

economies significantly strengthen the case for bilateral free trade and weaken the case for unilateral free trade.

Looking at the problem from a somewhat different perspective, tariffs and other impediments to trade create barriers to exporting and therefore barriers to efficient domestic production or barriers to domestic entry in the first place (Harris, 1985). These barriers tend to fall most heavily on and discriminate against firms from small countries. In the absence of public policy actions, the smaller of two countries will thus tend to have an even smaller proportional share of rent-earning firms.

This point (due to Harris, 1985) is sufficiently important that three brief examples will be given. First, suppose that the United States and Canada have equal tariffs in place. The consequence of uneven country size is that Canadian firms face an effective market size which is smaller than that of U.S. firms. The former face a free-trade Canadian market but a protected U.S. market while the latter face the opposite. U.S. firms are therefore more likely to undertake expensive R&D and consequently earn rents in emerging high technology industries.

Second, there may be fixed costs of entering the export market in terms of setting up distribution and marketing networks, etc. If Canadian firms are initially small due to tariff protection, they may not be able or willing to bear these entry costs. Third, it has been argued that for firms to enter export markets successfully they must first go through a learning period of domestic production. Here again, a large domestic market as in the United States means that domestic firms are able to achieve the scale needed for entry in the domestic market alone. A U.S. firm may decide to enter production while an otherwise identical Canadian firm may not.

The bottom line for Canada is that foreign tariffs and other barriers to trade constitute barriers to entry by Canadian firms. They impede efficient production in Canada and entry by Canadian firms into R&D intensive, rent-earning industries. As such, these barriers constitute an important issue of public policy, which should therefore be concerned with widening Canadian access to international markets. A more detailed discussion is given by Harris (1985) in his important monograph for the Commission.

Sunk Costs and Trade Liberalization

The analysis of free entry above assumed that any change such as trade liberalization would result in some firms entering and possibly others exiting until a new zero-profit equilibrium was achieved. Further, it was implicitly assumed that any firm with superior technology could enter and by pricing at average cost could force an existing firm to sell its assets and exit from the industry.

Both assumptions must be modified if firms' investments are sunk costs, that is, if investments are for various reasons irrecoverable or have very little market value should the firm choose to exit from production. In the extreme case where all investments are sunk costs, a firm will not exit from the industry until price is driven below marginal (as opposed to average) cost. When costs are sunk, existing firms have an advantage over new entrants even if the latter have better technology or entrepreneurship. Potential entrants know that the existing firms will price down to marginal cost before exiting, which may imply that entry is deterred. Sunk costs thus give first entrants a strategic advantage and may imply positive long-run profits for those firms.

The relevance of this point has been suggested to me by Professor Ronald Shearer. Suppose that prior to U.S.-Canadian trade liberalization, U.S. firms had sunk investments in technologies appropriate to the large North American market whereas many Canadian firms had sunk investments in technologies appropriate to the small Canadian market. Following trade liberalization, Canadian firms would be in some sense potential entrants if they faced the choice of either adopting the new technology or exiting from the industry. The sunk investments of the U.S. firms might then deter the Canadian firms from rationalizing, thereby leading to exit and a contraction of Canadian manufacturing.

This scenario cannot be dismissed as a theoretical possibility. But despite my lack of expertise on empirical issues, I am willing to venture an opinion that this outcome is highly unlikely for five reasons. First, as noted above, Baldwin and Gorecki (1983a) documented a sufficient degree of entry and exit in Canadian manufacturing to convince me that sunk costs are not of great importance. Reinforcing this result is their second paper (Baldwin and Gorecki, 1983b) which shows that Canadian manufacturing has indeed responded well to the substantial tariff cuts of the 1970s. Third, the current revolution in industrial technology (e.g., robots) may mean that a great deal of past investment is irrelevant. Existing Canadian and U.S. firms might find themselves on quite an even footing if trade liberalization were to occur in the near future. Fourth, Canada may not have a comparative advantage in large-scale, capital-intensive industries in any case (Harris, 1985) where the sunk cost argument may be most valid. Fifth, Canada does have a great deal of sunk investment in general physical and human industrial capital. Much of this is not narrowly firm or product specific and can be moved between uses in a rationalization process at fairly low costs. The existence of these extensive sunk investments in physical and human capital make rationalization rather than contraction the likely outcome in my opinion.

Despite the theoretical possibilities, I am thus inclined to follow Harris (1984) and argue that free entry is a reasonable starting point for empirical analysis.

Trade Liberalization Under Alternative Behavioural Assumptions

As with sunk costs, results of the theoretical discussions above can change if assumptions regarding behaviour of firms change. We assumed Cournot-Nash behaviour in our analysis, which views firms as regarding their rivals' outputs as fixed when they make their output decisions. This type of behaviour is somewhere on a spectrum between highly collusive and highly competitive. Some assumption about behaviour must be made (as is done of course in perfect competition models) and since highly collusive and highly competitive behaviour both seem counterfactual, Cournot-Nash behaviour seems to be a reasonable place to start.

We should, however, briefly consider the implication of alternative assumptions. Suppose first that firms in increasing returns industries tend to be very collusive. If this happens only within the small protected Canadian market but not within the larger North American or world markets, then the case for free trade is of course strengthened. In such a situation, free trade has a large pro-competitive effect on Canadian production. If on the other hand collusion extends to U.S. producers and third-country firms, then the pro-competitive effect of free trade disappears. Yet even highly collusive firms would wish to rationalize production following free trade in order to reduce the average costs of producing a given total output. The degree of collusion is an empirical issue and the bottom line here is that few researchers would support the notion that North American production is highly collusive. Third-country competition reinforces this result.

The opposite assumption is that competition from U.S. firms would be intense and even predatory following a removal of trade barriers between the two countries. The free trade scenario here is much more worrisome since it may involve many Canadian firms being forced out of business, with the resulting unemployment and adjustment problems. Once again, this is ultimately an empirical issue and I believe that few researchers would support a view of highly aggressive competition against Canadian firms. There are several good reasons for taking such a position. First, predatory competition to drive firms from an industry is generally not viewed as a profitable strategy. Second, it would presumably require a collusive effort of all foreign firms which is generally not possible, nor is there any reason why they should direct their efforts at Canadian firms rather than at one another. Third, predatory competition could run afoul of Canadian anti-dumping laws which could presumably remain in place following free trade. Fourth, I know of no evidence to suggest that there has been predatory competition by U.S. branch plants in Canada or by U.S. firms against Canadian firms entering the U.S. market.

To summarize all of the points made in this section, it is of course true that both theoretical and empirical results depend very much on underlying assumptions about behaviour, technology, and so forth. Although I do not consider myself an expert on empirical issues, my reading of the empirical evidence suggests that the assumptions used here and in Harris (1984) are broadly consistent with the Canadian situation.

The Role of Free Entry in Trade Liberalization

The final point to be made in connection with trade liberalization is that the effects of liberalization are more likely to be beneficial if there is free entry and exit from Canadian industry. The point can be made by first considering the case where there is no entry or exit. In this case we could have the situation shown in Figure 7-6, where the country is worse off with free trade relative to autarky. This constitutes an almost trivial example of a situation where a (prohibitive) tariff is welfare improving. By reducing foreign imports, the tariff essentially enlarges the market for the domestic firm, causing that firm to increase production. This might increase welfare, as shown in Figure 7-6.

Recall that we noted above that Figure 7-6 cannot occur with free entry, given, of course, the other assumptions of the model. Free trade forces domestic firms to rationalize or eliminates them completely. What happens in response to an increase in the domestic tariff? Such a tariff increase creates positive profits for existing domestic firms, thereby inducing inefficient entry. The reader will recognize this as the Eastman-Stykolt hypothesis, which we reported is supported by the Baldwin-Gorecki papers and the simulations done by Harris. A rigorous derivation of this inefficient entry result, using basically the same model as presented here, can be found in Horstmann and Markusen (forthcoming).

Foreign Firms and the Gains from Trade

As noted in the Introduction, it is well beyond the scope of this paper to examine questions concerning foreign ownership and multinational corporations. But a few simple inferences can be drawn from the model developed earlier. A consistent theme in the literature on multinationals is that foreign companies must have some advantage over local firms, such as superior technology or sunk investments, if they are to enter a market successfully. The idea is that these advantages must exist in order to overcome the natural disadvantages of distance, lack of familiarity with local conditions, etc. This superior technical knowledge or other advantage constitutes an important potential gain to the host country. Balanced against this increased technical efficiency is the pos-

sibility that the foreign firm earns and repatriates monopoly rents that might otherwise have gone to domestic entrepreneurs. Thus the multinational might increase GDP (the value of domestic production) but, due to repatriation, possibly decrease GNP (the income of domestic citizens). Many references and a technical analysis of this trade-off can be found in Markusen (1984).

The situation can be explained with the aid of Figure 7-4. Recall that $O\bar{Y}$ gives the income of domestic labour and $\bar{Y}G$ gives monopoly profits in that diagram. To say that the foreign firm possesses superior technology or has already invested the sunk cost F means that the production frontier for the foreign firm lies farther from the origin than would be the case if there are only domestic firms. This means that the existence of the multinational benefits domestic labour or more generally domestic factor income (i.e., \bar{Y} is further from the origin with the multinational in Figure 7-4). However, because profits now go to foreigners, total income could be less with the multinational (that is, the expanded \bar{Y} may still lie inside the old value of G).

A complete analysis is beyond the scope of this paper and the interested reader is referred to Markusen (1984). What is apparent is that competition for entry among domestic and foreign firms is once again sufficient for a favorable outcome. If competition drives foreign monopoly profits close to zero, then the technical efficiency effect dominates and the country is better off. If foreign firms have no such advantages, then competition between domestic and foreign firms that drives monopoly rents to zero at least leaves the country no worse off relative to prohibiting foreign investment. Indeed, in this latter case, the presence of the foreign firms might generate a beneficial pro-competitive effect of the type discussed earlier in the paper.

Summary and Conclusions

The following points briefly summarize the principal findings of this paper.

1. Recent analyses of international trade in the presence of scale economies have shown that these economies offer countries four sources of gains from trade in addition to the traditional sources of gains due to comparative advantage. First, scale economies are inevitably associated with imperfect competition. Trade increases market sizes, thereby leading to more firms, more competition, and a decrease in oligopolistic markups. Second, the larger market size encourages longer production runs and thereby leads to a pure efficiency gain through lower average costs. Some inefficient firms are eliminated and replaced by low-cost imports. This is also a source of gain though simultaneously a cause for concern from other points of view. Third, the increased

market size due to trade allows more products to be produced at reasonable costs, thereby leading to welfare gains from increased product diversity. Fourth, trade may allow firms to build more specialized plants, thereby rationalizing the number of products produced in a given plant.

2. But while scale economies offer these potential gains, the distortionary aspects of imperfect competition and non-convex production sets mean that there is no comprehensive theory indicating that gains will be realized in practice. It is possible to construct theoretical situations in which a country is made worse off by trade liberalization.

3. At a general level, a sufficient condition which rules out perverse possibilities is that trade leads to a rationalization of production in the following sense: in each increasing-returns industry, trade either leads to an expansion in firm output or to elimination of the firm by a low-cost import. Alternatively, perverse welfare outcomes are linked to situations in which firms respond to import competition by decreasing output, thereby increasing average costs and production inefficiency. For a country to be worse off with trade liberalization, this latter outcome must somehow be more typical across industries than the rationalization outcome. It is interesting to note here that the modern theoretical view of gains due to scale economies is closely consistent with the traditional industrial organization view.

4. Underlying economic conditions which make rationalization more likely and gains from trade liberalization larger include the following: (a) free entry and exit from domestic production; (b) relative technological and resource parity with trading partners; (c) horizontal product differentiation; and (d) minimum efficient plant size which is large relative to the domestic market (i.e., the domestic economy is small).

5. It is my reading of the extensive empirical literature that all of the above four conditions are probably valid for the Canadian economy in a comparison with the United States. Baldwin and Gorecki documented a significant degree of entry and exit, and both they and others (Eastman and Stykolt, 1967; Caves, 1980) have consistently shown that minimum efficient scale in many industries is large relative to Canadian market size. Some degree of product differentiation is clearly implied by actual trading patterns. Technology and capital are very mobile across the border, while the few immobile resources needed in manufacturing probably tip the scales in Canada's favor.

6. In a recent study incorporating scale economies into a general equilibrium trade model, Harris obtains results that multilateral free trade could bring Canada a welfare gain of about 10 percent of GNP. In

light of our theoretical discussion, I reviewed the assumptions used by Harris which I felt contributed to the estimation of this rather large welfare gain. Making use of the empirical literature just referred to, I concluded that his assumptions were appropriate.

7. Most of the theoretical discussion in the paper was conducted in the context of free trade versus autarky in order to keep the conceptual issues simple. The section on counterfactual empirical studies then combined the theoretical results with the empirical literature to comment on trade liberalization, particularly bilaterally with the United States. My finding was that scale economies strengthened the case for bilateral free trade and weakened the case for unilateral free trade. I argued that the assumptions needed to arrive at this result fit well with the empirical evidence. Overall, I find the case for bilateral free trade with the United States to be very strong.

8. A final comment might be offered with respect to the size of the Canadian manufacturing sector, an issue which appears to concern policy makers. In both the factual analysis of Baldwin and Gorecki and the counterfactual analysis of Harris, there is absolutely no support for the notion that free trade with the United States would result in a sizable contraction of Canadian manufacturing. While there would most certainly be significant intra-sectoral adjustment, the evidence points to an overall expansion in Canadian manufacturing.

Appendix

Summary of Discussion of Technical Models

The purpose of this appendix is to attempt to present the arguments of the four technical sections of this paper in simple, non-technical language. The benefits of doing this are obvious — the paper becomes accessible to a wider audience. The costs are far less obvious. In simplifying the language, we lose the precision connected with the development of technical models. This precision takes the form of showing exactly what assumptions are necessary to guarantee certain results. As is apparent to anyone who has read the introduction to this paper, we cannot make categorical statements like “trade liberalization

increases GNP” when there are scale economies or imperfect competition in the economy. The models allow us to show exactly what conditions are needed to produce gains or alternatively what circumstances could lead to unfavourable outcomes.

The issues dealt with in this paper are far from simple. Indeed, the fact that I was asked to write such an expository paper is symptomatic of the difficulties. This is particularly true with regard to imperfect competition, where the form of strategic behaviour adopted by firms is crucial to predicting their response to trade liberalization. But it is not easy to discuss strategic behaviour in simple everyday language. That is precisely why we invent technical terminology in the first place.

In what follows, the results of the technical sections are presented in simple language and statements are put forward without the qualifying discussions about the precise assumptions necessary to ensure their validity. Readers are asked to remember this caveat as they proceed. The headings below correspond to section titles in the main body of the paper.

The Gains-from-Trade Theorem

The demonstration that countries can gain from international trade dates back to British economist David Ricardo. The notion is that countries, for various reasons, differ in their abilities to produce different goods. Each country produces some goods more cheaply than its potential trading partners while other goods can only be produced at a greater cost. Countries can mutually gain from trade if each specializes in those goods which it can produce most efficiently and ceases production of those goods which are more efficiently produced abroad. Each country then sells its specialties in the international marketplace in exchange for the specialties of other countries.

But to say that countries *can* gain from trade is not to say that such gains *will* be captured in practice. Following Ricardo, economists were able to show that gains from trade *will* be captured by a competitive, distortion-free economy. The argument is basically this. In a market economy, consumers and producers make decisions on the basis of prices. A high price is a signal to producers that they should supply more of the good in the interests of making profits. The high price is also a signal to consumers to try to economize on purchases or to find a cheaper substitute. In a competitive economy with many producers and consumers, market prices will correctly reflect consumers’ true underlying valuations for commodities and firms’ true costs of production. When international trade is allowed, market prices will lead firms to make correct decisions as to what goods to specialize in and produce for export, while consumers ultimately choose to import those goods that

are more efficiently supplied by foreigners. Potential gains from trade become actual gains from trade in a competitive economy.

Gains from Trade with Increasing Returns to Scale

Increasing returns to scale refers to situations in which the average cost of producing a good falls as more of the good is produced. For example, if a firm only wanted to produce 5,000 cars per year its costs might be \$50,000 per car, but costs might fall to \$10,000 per car if 500,000 cars per year were produced. While almost all economic activities enjoy a certain degree of scale economies, these economies are often exhausted at a level of production which is small relative to the total market demand for the product. Industries in which the output level which achieves minimum average cost of production is small relative to total market demand tend inevitably to be competitive industries supporting large numbers of firms. Changes in the total outputs of these industries tend to occur by adding or subtracting firms. The average cost of production is *constant* at its minimum level when industry output changes.

When the level of output needed to achieve minimum average cost (called the “minimum efficient scale” of production) is very large relative to the market, only a few or perhaps only one firm can exist. These markets tend to be imperfectly competitive and changes in industry outputs tend to be associated with changes in the outputs of individual firms. Thus, unlike the competitive case, an expansion of total industry output has the favourable side effect of *lowering* average production costs and, conversely, a contraction in output has the unfavourable effect of raising average costs.

Expanding the output of an increasing returns industry has an additional beneficial effect due to the presence of imperfect competition. With imperfect competition, firms charge a price higher than the costs of producing an additional unit of output (called the “marginal cost” of production). But since the price charged reflects the consumers’ valuation of the good, this means that the value of an additional unit exceeds the cost of producing it, and hence more output is undesirable. Conversely, a decrease in output is undesirable. This constitutes a second reason why expanding outputs in increasing returns industries have a beneficial welfare effect.

Note that neither the average-cost effect nor the imperfect-competition effect is present when there is perfect competition. Consequently, the strong statement that trade always improves welfare in the competitive case must now be modified. The correct statement becomes “trade increases welfare provided that there is not (on average) a decrease in the output levels of increasing returns industries.”

This discussion points to the *possibility* that trade may decrease welfare by moving firms' outputs in the "wrong" direction when there are scale economies and imperfect competition. On the other hand, it is possible that gains from trade are *much larger* when there are scale economies than when there is perfect competition. The reason is that scale economies and imperfect competition offer four sources of gains from trade in addition to those arising from differences in resource endowments or technology between countries. First, international trade may increase the competitive pressure on monopolistic domestic firms, thereby leading to more efficient production and lower prices. Second, trade may "rationalize" production within the country, eliminating production of some goods and expanding outputs of others, again leading to lower prices and costs. Third, trade may permit the introduction of new products, thereby leading to welfare gains from increased product diversity. Fourth, trade may rationalize the number of product lines produced in individual plants since the larger market allows firms to build more specialized plants.

The circumstances under which these gains will be captured in practice is the topic of the next two sections.

Oligopoly

Suppose that there is only one domestic firm producing a particular good, e.g., cars. Suppose that there is only a single foreign firm as well. As we just discussed, trade liberalization is sure to benefit Canada if it leads to an increased output of the domestic firm. Alternatively, Canadian GNP will increase if the domestic firm is driven out entirely and lower-cost cars are supplied by the foreign producer. Canadian resources are then devoted to producing other goods in which Canada has a comparative advantage (adjustment costs may, of course, be substantial). An unfavourable outcome could occur if trade liberalization causes the Canadian firm to reduce but not eliminate production. This causes both an unfavourable average-cost effect and an unfavourable imperfect-competition effect.

Conditions which are sufficient (but certainly not necessary) for trade liberalization to stimulate the output of the domestic firm are as follows. First, Canada must not be larger than the country in which the foreign firm is located. This ensures that trade liberalization gives the Canadian firm a sufficiently larger market that it will wish to produce more.

Second, the Canadian firm must not have significantly inferior technology, a situation which might cause it to reduce output in response to trade liberalization. It should be emphasized that inferior Canadian technology must never be inferred from an observation that Canadian production costs are higher prior to trade liberalization. In my opinion, most such observations are due to small scale production in the pro-

tected market. If this is the case, higher Canadian costs argue in favor of trade liberalization, not against it.

Third, the competitive or strategic behaviour between the domestic and foreign firm should not be highly collusive or highly aggressive. Highly collusive behaviour might mean that firms “sit tight” following trade liberalization, but there is at least no welfare loss due to such a failure to respond. Highly predatory behaviour could mean that a richer foreign firm would drive the Canadian firm out of the market and subsequently charge a high price.

It is my reading of great volumes of research on Canada that all three of these requirements can be safely assumed for Canada. Thus while the conditions that ensure gains from trade liberalization are restrictive in principle, they seem likely to be satisfied in practice.

Free-Entry and Average-Cost Pricing

The previous section discussed a situation in which there is only one domestic firm, although in principle any *fixed* number of firms will lead to the same conclusion. Suppose now that we drop this assumption and assume instead that firms will enter or exit from an industry until there are roughly zero economic profits being earned in the industry. In this situation, it appears much less likely that trade liberalization could result in an unfavourable outcome.

Trade liberalization means that domestic firms now essentially face a larger market, but also face more competition. If the domestic firms have technologies roughly equivalent to foreign firms, the domestic firms must respond to this larger market and increased competition by expanding their outputs, thereby lowering average costs. We know that this is in turn sufficient for positive gains from trade.

The difference between the free-entry case and the one-firm case of the previous section occurs when domestic firms have some inherent disadvantage relative to foreigners. With free entry, firms are earning zero economic profits prior to trade liberalization, and hence there is no “slack” that they can use to absorb foreign competitive pressures. Domestic firms must respond to trade liberalization either by producing more efficiently (large outputs at lower average costs) or by going out of business. It is generally not possible for firms to respond to trade liberalization by becoming less efficient when there is free entry. Gains from trade liberalization are thus very likely although there may, of course, be serious adjustment problems for inefficient firms forced out of business.

Notes

This paper was completed in September 1984.

1. Total GNP and per capita GNP need not move in the same direction in response to some policy change. The well-known thesis of Dales (1966) is that the effect of protective tariffs in Canada has been to increase total GNP (by encouraging immigration of labour and capital) but lower per capita GNP. In the simple model developed in this paper, however, the country's factor endowment is fixed, and hence total GNP and per capita GNP always move in the same direction.
2. Many readers are no doubt aware that much has been written on this topic. Other important studies include Block (1974); Caves (1975); Caves, Porter and Spence (1980); Fuss and Gupta (1981); Gorecki (1976); Gupta (1979); Jones, Laudadio and Percy (1973); Lerner (1973); and McFetridge (1973). It was felt that to analyze all of these individual contributions was beyond the scope of this paper. The Eastman and Stykolt study was picked because it is regarded as seminal. The Baldwin and Gorecki papers were picked because they are the most up-to-date and use a far better data set than was available to other researchers. The Baldwin and Gorecki papers eclipse many of the earlier papers.
3. The use of community indifference curves here means that we are ignoring a whole range of distribution issues. It is widely understood that any change, whether in policy, domestic industry, or foreign industry, tends to redistribute income, thus creating gainers and losers. We are abstracting from these important issues and focussing only on total GNP. For better or for worse, the traditional justification for this focus (other than the length of the paper) is that income distribution issues should fall within the realm of domestic taxation policy, not international trade policy. I should note that although a one-factor model is used for most of the paper there is still the issue of the distribution of income between factor income and monopoly profits.
4. Again, see the references noted in 2 above. But most recent and most extensive confirmation is found in the Baldwin and Gorecki papers as just discussed.

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Summary of a Project on the General Equilibrium Evaluation of Canadian Trade Policy

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Introduction

This paper reports on a project carried out for the Ontario Economic Council over the years 1982–1984. The purpose of the project was to construct a policy simulation model in the general equilibrium tradition in order to examine Canadian trade policy questions. This general equilibrium trade model, referred to by the acronym GET, was constructed with emphasis on the manufacturing sector and differed from existing models in its explicit assumptions of scale economies, imperfect competition and capital mobility. While each of these assumptions has figured prominently in the Canadian policy literature on trade and economic structure, none of the quantitative models used by economists to address trade policy questions has actually included any of them at the level of general equilibrium. It was, therefore, a major departure from existing practice to incorporate these features within a fully articulated general equilibrium model. The effect of doing so turned out to be quite dramatic.

This paper summarizes material which is already published and listed in the bibliography.¹ It outlines the basic structure of the GET policy model; explains the basic economic issues which arise when incorporating scale economies, imperfect competition and capital mobility within a general equilibrium model; summarizes the major results; and offers some comments on the relevance of these results for trade policy in the 1980s.

Background

The common model used in the analysis of international trade patterns and the impact of protection on income prices, production and employment is based for the most part on the Heckscher-Ohlin/Ricardian model of international trade developed extensively in the first half of this century. This model explains trade in terms of differences in production technologies or resource endowments between countries. It is a “neo-classical” model, meaning that it assumes fully flexible prices which clear all commodity and factor markets and perfect competition in all markets. Thus, no individual buyer or seller exerts any significant power on the price in his own market. This model usually incorporates the assumption of constant costs in all industries. Thus, as industry output expands or contracts, unit cost of output neither falls nor rises.

Perfect competition, together with the assumption of constant costs, allows the trade economist to ignore the individual firm as a unit of study and to focus on the inter-industry pattern of resource allocation. It also means the model is logically consistent, as increasing returns to scale, or decreasing costs of production, have been known since the 1930s to be inconsistent with the perfect competition model. The other great benefit of maintaining the perfect competition assumption is that it allows the economist to work with the Walrasian general equilibrium theory, which is the basis for most microeconomic resource allocation models. The applied general equilibrium models of Shoven and Whalley² are the most prominent of this class of models. The Heckscher-Ohlin/Ricardian model referred to above is also based on Walrasian theory. This unity of approach across branches of economic theory has been a major factor contributing to the development of economic analysis in the last three or four decades.

There are problems, however. From the early days of economic theory, many economists were unhappy with the assumptions of perfect competition and realized that while perhaps useful, these assumptions were patently at odds with the facts for many industries and markets. From the 1930s and particularly in the 1950s, economists interested in imperfect competition tended to specialize in industrial organization. The study of monopoly and oligopoly was confined for the most part to this field and had little impact on other areas of economics, particularly the area of international trade.

Gradually, however, a number of practical trade economists realized that the competitive model was not appropriate for small economies such as Canada. During the 1960s some Canadian economists, including English, Eastman and Stykolt, and the Wonnacotts, began writing about the impact of protection on industries which were oligopolistic and characterized by decreasing costs. At the same time, Bela Balassa wrote on similar matters with respect to the effect of the formation of a

European customs union. For the most part, these economists emphasized a set of factors that were ignored by most of the trade theory establishment, including the great Canadian trade economist Harry Johnson. Within Canada, these new views became well known and were a basis for development of the “free trade” position. Their basic point was that protection, both foreign and domestic, was anti-competitive in its effects, producing inefficient domestic firms. One major form of inefficiency was highly diversified manufacturing plants with production runs too short to realize the scale economies available in larger countries. The studies demonstrated that trade barriers contributed to high prices, low wages, low productivity and poor export performance of the manufacturing sector.³

The position taken by these economists is still fairly controversial for many reasons, not the least of which being that as of 1982 no one had done a quantitative disaggregated general equilibrium analysis of these issues. The Ontario Economic Council project was the first attempt to do precisely this. It is the first such attempt that I know of for any country and therefore remains fairly controversial.

The GET Policy Simulation Model

This section describes in non-technical terms the basic features of the applied general equilibrium model of the Canadian economy upon which the subsequently reported results are based. The model is complex, so the description given here provides only a broad overview of the basic features. The reader interested in the details of the model structure is referred to Harris (1984a).

The GET model is within the tradition of economic models which emphasize the role of relative price changes in the economic adjustment process. A rise in demand in one sector raises the price in that sector and the model tracks the subsequent inter-industry adjustments. The model is logically consistent in that supply must equal demand in every market and all markets are linked together in the appropriate ways—hence the term *general* equilibrium. For a model of this type, it would be regarded as medium sized. It contains 30 commodities, 2 primary factors of production, and 29 industries. Exports and imports are explicitly treated as responding to the various exogenous and endogenous variables, including relative price changes due to protection. One innovative assumption is that capital, meaning both physical capital goods and financial capital, is *mobile* across the Canadian border. The implication is that any departure of the long-run rate of return on investment in Canada from that in the United States would be met by a capital flow which would completely remove this differential in the long run. While a fairly natural assumption given the large degree of foreign ownership in the Canadian economy, it has not been invoked in applied Canadian trade models.

The main innovation within the model is the treatment of the manufacturing sector within Canada. Each of the 20 manufacturing industries is regarded as imperfectly competitive to some degree. The extent of imperfect competition is endogenously determined within the model. Firms rationally set prices in response to perceived demands for their goods and their competitors' reactions. Each firm has a cost structure with average cost declining over some range of output. Firms enter and exit from industries in response to profits and losses. The explicit recognition of firms, their cost curves, and entry and exit allows the model to identify what is commonly called the "rationalization" of industry. An example would be a reduction in the number of firms in an industry, with increasing output per firm, allowing the industry as a whole to produce at lower cost. I take rationalization here to include both market-induced and non-market-induced changes in the number of firms and industry costs. Tariffs play a crucial role in rationalization arguments. The domestic tariff, by inducing protection, restricts entry and results in non-competitive pricing by the protected firms, which in turn induces low output per firm and high costs. The foreign tariff is equally important for different reasons. If Canadian firms are denied access to world markets, they may not be able to attain sufficient size for the kind of specialization and rationalization effects that would be most desirable.

The GET model was explicitly designed to answer these types of questions. It is important to emphasize the general equilibrium nature of the model. While one-industry models are capable of looking at some of the questions regarding rationalization and protection, the total effect of such issues as protection is more than the simple sum of the individual-industry effects, because of the complex interaction between the various product and factor markets. It turns out, for example, that in determining the extent of rationalization, it is crucial to consider what happens to the equilibrium Canadian real wage. Such a question can only be addressed within a general equilibrium model in which the wage is endogenously determined.

The existing GET model is scaled to a 1976 data set, including the technology and trade barriers in place at that time. Since conditions have obviously changed, I shall later comment upon what the changes may imply for the relevance of the results for current trade policy.

The Impact of Trade Liberalization: Aggregate Results

Table 8-1 shows the results obtained with the GET model on the removal of the 1976 trade barriers, both domestic and foreign. The trade barriers include ad valorem tariff-equivalent estimates of some non-trade barriers (NTBs). Many NTBs, such as government procurement policy, are impossible to quantify and hence not included. The parameter values of

the model are based on econometric estimates from the early and mid-1970s. The input-output table incorporated within the model is the 1976 Statistics Canada table. Some of the parameters are only imprecisely known and hence the results refer to what are known as the “best guess” or reference parameter values.

TABLE 8-1 Unilateral and Multilateral Free Trade Simulations
Summary Aggregate Statistics (percentage changes)

Variable	Unilateral Free Trade	Multilateral Free Trade
Wage	9.98	25.21
GNE	3.52	12.58
GNP (real)	3.49	7.02
Welfare gain	4.13	8.59
Length of production runs	41.40	66.84
Average fixed costs	-18.93	29.94
Labour productivity	19.57	32.62
Total factor productivity	8.58	9.50
Trade volume	53.14	88.61
Labour reallocation index	3.93	6.15
Intra-industry trade index	-0.70	-1.71

Source: David Cox and Richard G. Harris, “Trade Liberalization and Industrial Organization: Some Estimates for Canada,” *Journal of Political Economy* (1984), Table 1.

Notes: All relative changes are with respect to the reference (all tariffs in place) equilibrium. (1) GNE and GNP refer to gross national expenditure and product respectively. (2) The welfare gain is measured as the Hicks Equivalent Variation as a percent of initial GNE. (3) The length of production run index is the weighted average of output per firm in each manufacturing industry, where the weights are the industries’ shares of total manufacturing output. (4) The index of average fixed costs is the weighted average of average fixed costs per firm in each manufacturing industry, where the weights are the industries’ shares of total manufacturing output. (5) Labour productivity is defined as output per unit of labour. The labour productivity index is defined as the weighted average of labour productivity in each industry, where the weights are the industries’ shares of the total output of all industries. (6) Total factor productivity is measured by a geometric quantity index of all inputs. The aggregate index of total factor productivity is the weighted average of total factor productivity in each industry, where the weights are the industries’ shares of the total output of all industries. (7) Total trade volume is the sum of the value of exports and imports across all industries, including non-competing imports. (8) The intra-industry trade index is the weighted average of the Balassa-Grubel-Lloyd (BGL) intra-industry trade index in each industry, where the weights are the industries’ shares of total trade volume. The BGL index is defined as:

$$I = \frac{|E_i - M_i|}{E_i + M_i}$$

where E_i and M_i represent the value of industry i ’s exports and imports respectively. (9) The labour reallocation index measures the percentage of the total labour which must shift intersectorally.

TABLE 8-2 Industry Statistics with Multilateral Free Trade
(percentage changes)

Industry	Output	Value-Added	Net Exports	Labour Productivity	Scale Elasticity	Markups
1. Food and beverage	29.07	-4.63	9.63	36.41	43.06	-46.47
2. Tobacco	31.78	-18.18	12.09	52.61	14.69	-63.25
3. Rubber and plastic	42.76	23.75	-288.13	26.68	8.06	-42.28
4. Leather	-13.14	-26.85	-277.82	35.74	11.03	-79.11
5. Textiles	94.17	62.55	-242.05	30.10	8.77	-70.98
6. Knitting mills	6.74	-21.32	-321.94	41.96	12.82	-114.75
7. Clothing	68.42	21.86	-127.58	62.18	14.78	-74.55
8. Wood	11.89	-3.02	-16.08	23.39	9.40	-42.14
9. Furniture and fixtures	-18.37	-30.15	-385.10	34.11	11.29	-64.87
10. Paper and allied products	95.78	78.49	204.94	20.24	7.81	-53.89
11. Printing and publishing	34.23	27.82	8.84	20.50	8.36	-37.42
12. Primary metals	37.53	20.69	-44.37	21.92	5.77	-34.51
13. Metal fabricating	22.61	10.51	-295.93	25.93	8.23	-47.06
14. Machinery	-7.03	-13.03	-245.82	24.55	6.37	-41.30
15. Transportation equipment	121.84	98.19	255.68	25.85	2.56	-11.94
16. Electrical products	1.90	-8.16	-274.28	27.23	9.13	-57.85
17. Non-metallic mineral production	25.21	11.28	152.22	20.28	8.66	-32.42
18. Petroleum and coal	25.96	15.75	-19.41	26.94	0.91	9.48
19. Chemical products	28.85	15.90	-274.17	21.30	6.26	-39.69
20. Miscellaneous manufacturing	-10.46	-19.93	-284.96	28.79	8.54	-64.60

21. Agriculture	60.63	67.60	245.40	20.01
22. Forestry	31.23	50.73	297.11	9.02
23. Fishing	32.14	44.50	173.70	14.50
24. Mining	28.46	38.38	47.21	16.24
25. Construction	4.04	14.40	-300.21	13.97
26. Transportation	1.52	14.67	-47.25	10.85
27. Communication	2.37	16.73	-1,471.70	9.81
28. Electric power and gas	17.28	24.82	-15.12	17.65
29. Others	6.23	18.02	-153.45	12.70

Source: David Cox and Richard G. Harris, "Trade Liberalization and Industrial Organization: Some Estimates for Canada," *Journal of Political Economy* (1984), Table 3.

Notes: All relative changes are with respect to the reference (all tariffs in place) equilibrium. (1) Net exports are defined as the difference between exports and imports. The relative change is measured with respect to the absolute value of net exports. (2) Labour productivity is defined as output per unit of labour. (3) The scale elasticity or local measure of scale economies is measured as the ratio of marginal to average cost. (4) The markup is defined as the ratio of price to unit variable cost.

The most surprising result of this part of the study is the real income gain from unilateral free trade — about 4 percent of base GNP. This is a very large number compared with other estimates, which are typically less than one percent of GNP. The real wage rises by about 10 percent, with an increase in labour productivity of about 20 percent and an increase in total factor productivity of about 8.5 percent. The major source of these productivity and real income gains are reductions in the average cost of production through industry rationalization. Rationalization in this case leads to an average increase in output per firm of close to 40 percent. In some industries this means a fairly dramatic decline in the number of firms. *The most prominent effect of unilateral free trade is the rationalization it induces at the level of the individual industry.*

Under simultaneous reduction of both foreign and domestic trade barriers, i.e., multilateral free trade, the effects are even greater. The aggregate real income gain is 8.6 percent and the real wage rises by 25 percent. These are clearly very substantial gains. Trade volume increases enormously, from \$84 billion (1976 Canadian) to \$160 billion. This is accompanied by an increase in inward investment flows as a result of the more capital-intensive production techniques adopted in many industries in response to the higher relative price of labour. This is particularly true in the natural resource and service sectors of the economy.

Impact of the Trade Liberalization: Industry Results

Table 8-2 reports the industry changes from 1976 levels arising from the introduction of multilateral free trade (MFT). These results are quite striking. The conventional wisdom on the impact of protection on the Canadian economy is that the manufacturing industries are protected and the resource sectors bear most of the burden of protection. It turns out to be the opposite. Total employment within manufacturing rises by 12 percent and employment in the service and resource sectors declines.

The overall pattern of resource reallocation suggests that both inter-industry and intra-industry adjustment occurs. In aggregate terms the percentage of intra-industry trade changes little in response to MFT. This, however, masks a more highly specialized pattern of production which occurs within the manufacturing sector. Substantial gains in resource efficiency from MFT are likely to be made only if significant intersectoral shifts take place in response to changing patterns of resource efficiency between industries induced by the removal of protection in Canada and abroad.

Under MFT, 18 of 29 industries experience an increase in value-added of more than 10 percent. Nine out of 29 industries are winners on employment grounds and only 4 are losers — leather, miscellaneous manufacturing, machinery, and knitting mills. Manufacturing as a whole moves from a significant trade deficit position to a trade surplus position. In total, exports rise in all but two manufacturing industries, and in construction, communications, electric power and gas, and services. Imports rise in all industries. The common characteristic of the losers is a fairly labour-intensive technology. Winners have one and often more of the following characteristics:

- unexploited economies of scale;
- low levels of initial protection;
- a capital-intensive technology;
- high export elasticities; and
- moderate degrees of import competition.

Distribution of Gains and Adjustment Patterns

Any change in trade policy creates losers and gainers. Furthermore, the labour adjustment burden will be inequitably distributed. The results on MFT show that some of the conventional wisdom about losers in manufacturing and gainers in resource industries is misplaced. For example, the model suggests that the biggest loser from protection in the 1970s was labour in the manufacturing sectors. While consumers as a whole faced higher prices from protected imports, their loss is about one-quarter that of labour in the manufacturing industries as a whole. Within manufacturing the picture is more varied. Labour-intensive industries experience the biggest employment losses, and this is where the major labour adjustment burden must be borne. Since both winning and losing industries are concentrated in Ontario and Quebec, the regional impact is largely a matter of adjustment in the industrial structure of central Canada. Both the west and east are (small) net gainers from trade liberalization.

Another aspect of the pattern of adjustment is the distribution of the adjustment between inter-industry and intra-industry shifts of labour. Some economists are of the view that intra-industry adjustment is less costly than inter-industry adjustment. Such is often said to be the European experience with the formation of the European Community.⁴ If this view is correct, the results from the GET model are not too comforting. Multilateral free trade would require about 6 percent of the Canadian labour force to shift intersectorally, mostly within manufacturing and partly out of services and resources into manufacturing. While 6 percent of the labour force is not a large number, it is substantial in terms of the retraining of the labour force that would be required.

The model also indicates a significant amount of intra-industry adjustment in the form of a fall in the number of firms in certain industries, including both expanding and contracting industries. In some heavily protected industries the number of plants is cut in half. In our current state of knowledge, it is difficult to put a number on the actual cost of adjustment associated with these reductions in the number of firms. One view is that this type of cost is relatively low, given that it does not involve human resources directly. Another view is that even when plant closures are beneficial in terms of rationalization, they create severe dislocation costs for employees within those plants. There is, no doubt, something to this view.

In summary, the GET model suggests that the long-run gains arising from trade liberalization are substantial and accrue largely to labour within central Canadian manufacturing. However, the adjustment costs of making the transition may be substantial. A realistic approach to trade liberalization necessarily involves mitigating these adjustment costs through appropriate policies.

Unilateral Sectoral Trade Liberalization

One of the policy simulations done with the GET model was to investigate the effects of unilateral free trade within a single sector. This is not an investigation of “sectoral free trade” as the term is now used, but it provides a rough indication of the effects of import competition in each of the sectors individually.⁵ The results of these simulations are reported in Table 8-3.

In general, the picture given by these results is quite positive. In 12 of the 20 manufacturing industries, the unilateral imposition of sectoral free trade is employment creating. Furthermore, in each case, exports increased by more than imports in percentage terms. Finally, in all but three of the manufacturing industries, there is a positive aggregate real income gain to the economy. The numbers are not small. For example, in the food and beverage industry, the real income gain is about one billion (1976) dollars. Looking only at the domestic side of the picture, the results suggest that sectoral free trade, while not as beneficial as complete free trade, is a good thing for the most part in terms of net economic efficiency.

For those industries with a positive welfare gain, the rationalization effects are responsible for most of the gains. In three industries — leather, knitting mills and clothing — unilateral sectoral free trade turns out to be welfare decreasing. The negative welfare effects point up the limitations of a sectoral free trade arrangement. Because these three industries are highly labour intensive and heavily protected, cutting domestic protection results in a substantial outflow of employment into

TABLE 8-3 Unilateral Sectoral Free Trade

Industry	\$	D-P	D-L	D-X	D-M	D-LPR
1. Food and beverage	1,069.73	-0.07	-0.02	0.51	0.47	0.13
2. Tobacco	218.04	-0.14	0.0	1.13	1.39	0.26
3. Rubber and plastic	172.41	-0.05	0.06	0.73	0.21	0.06
4. Leather	-11.17	-0.08	-0.21	0.91	0.40	0.12
5. Textiles	130.25	-0.08	0.03	0.88	0.30	0.09
6. Knitting mills	-14.95	-0.12	-0.37	1.59	0.85	0.19
7. Clothing	-17.40	-0.13	-0.48	3.08	1.87	0.30
8. Wood	242.90	-0.03	0.08	0.20	0.12	0.03
9. Furniture and fixtures	23.72	-0.06	-0.20	0.94	0.87	0.10
10. Paper and allied products	373.91	-0.04	0.16	0.31	0.21	0.04
11. Printing and publishing	84.22	-0.03	0.00	0.32	0.15	0.03
12. Primary metals	499.86	-0.03	0.18	0.57	0.11	0.03
13. Metal fabricating	347.41	-0.04	0.04	0.69	0.21	0.06
14. Machinery	5.18	-0.03	0.02	0.44	0.10	0.03
15. Transportation equipment	2,673.45	-0.04	0.53	0.95	0.62	0.13
16. Electrical products	108.82	-0.05	-0.04	0.54	0.26	0.06
17. Non-metallic mineral production	193.46	-0.04	0.10	0.56	0.11	0.04
18. Petroleum and coal	94.63	-0.01	-0.01	0.06	0.07	0.01
19. Chemical products	101.34	-0.03	0.04	0.42	0.14	0.03
20. Miscellaneous manufacturing	49.01	-0.04	-0.02	1.01	0.30	0.07

Source: Richard Harris, *Trade, Industrial Policy, and Canadian Manufacturing* (Toronto: Ontario Economic Council, 1984), Table 23.

Notes: \$EQV is the Hicks equivalent variation welfare benefit measure in millions of 1976\$. D-P is the relative change in the consumer price of the domestic good from the industry indicated in the left-hand column. D-E is relative change in labour employed in the industry. D-X is relative change in exports in the industry. DM is relative change in imports in the industry. D-LPR is relative change in labour productivity in the industry. All changes relative to base, all tariffs in place equilibrium.

other industries. Since protection is still in place in these other industries and they are not rationalized, the additional resources are employed inefficiently and actually lead to a deterioration in the terms of trade in the receiving industries. The virtue of complete free trade is that this cannot happen, because all sectors are rationalized.

Trade Policy in the 1980s

The results reported above and in the studies cited were all based on a mid-1970s data set. This section examines the extent to which these results are relevant for the 1980s. There are three sets of issues here. First, what has happened to the levels of protection in Canada and abroad since the mid-1970s? Second, how have technological changes

altered scale economies in the manufacturing industries? Third, to what extent have changes in world competition altered the terms of trade and thus Canadian comparative advantage? Hard data are inadequate with respect to all of these issues, so my comments are mostly impressionistic.

With regard to protection, by 1987 the average level of tariffs on Canadian exports to the United States will be very low — in the order of 3 to 4 percent when the Tokyo Round reductions are complete. Therefore, it is sometimes claimed that most of the gains cited may have already occurred. There is, no doubt, some truth to these claims. The Baldwin-Gorecki (1983) study demonstrates clearly that rationalization did occur over the 1970s and attributes much of it to tariff reductions.

The real issue in the 1980s has to do with non-tariff barriers (NTBs). There is a widespread perception that these have increased. It is extraordinarily difficult to quantify these barriers. Mid-1970s estimates in some industries are undoubtedly inappropriate for the 1980s. For example, consider transportation equipment. A major NTB that Canadian exporters of urban transportation equipment face is the procurement practices of local governments in the United States. In many cases these city governments will resort to local sources of supply even in the face of a substantial price differential between the local and Canadian product. The NTB estimates in the study did not account for this type of effect, nor do we know how pervasive they are today. In some industries, such as autos, the level of protection by both the United States and Canada against Japanese imports has risen substantially. The same can be said of clothing, footwear and textiles. A host of other NTBs around the world have gone up, but no one knows by how much in units comparable to tariff rates. The levels of protection in place in 1984 may actually be below those of 1976. We simply do not know.

With regard to scale economies, the picture is similar to that of NTBs. In some industries, such as steel, scale economies seem to have fallen.⁶ In others, such as textiles, transportation equipment and resource processing, they seem to have gone up. Some argue that in many industries scale economies may be falling, because microprocessor technology have made possible more flexible manufacturing processes. On the other hand, studies of industrial structure reveal little in the way of decreases in industrial concentration. Perhaps production scale economies are being replaced by organizational-marketing economies of scale. Our state of knowledge here is so sparse that it would take a panel of experts from each industry to resolve the issue. This research might be worth undertaking.

Since the mid-1970s, world competition has changed to a considerable degree. The continuing growth of Japan as the major industrial exporter of a variety of high technology products is well documented. Of even greater importance is the emergence of the newly industrialized coun-

tries (NICs) as exporters of conventional industrial products requiring fairly high skill levels, as well as their continuing advantage in low skill labour-intensive products. With the emergence of the new high technology industries and the growth of the NICs, there is no doubt that particular sectoral results from the Ontario Economic Council study are suspect in 1984. I am not convinced, however, that the general nature of the results is incorrect. For example, if anything, Canadian comparative disadvantage in labour-intensive products has increased. With respect to some of the basic industrial products such as steel and autos, the results are probably too optimistic. The ability of the NICs to produce these products with low wage costs means that with complete free trade these industries in Canada would be under serious competitive pressure. The model probably gives a reasonably accurate picture of North American trade, since the data are heavily dominated by the U.S.-Canada trade component and the industrial structure of the two countries has not changed much since the mid-1970s.

The conclusion I would draw from this brief post-mortem is that the model is capable of telling us a lot about North American trade liberalization, but that with respect to long-term free trade with the entire world, the results are probably suspect.

Conclusion

This paper has reported on an extensive trade modelling project carried out for the Ontario Economic Council. The results demonstrate that free trade is of major benefit to the manufacturing sector of the Canadian economy, and on balance is employment creating within that sector. The real income gains to Canadians are in the order of 8 to 10 percent of Canadian GNP and accrue largely in the form of higher real wages to Canadian labour. The adjustment problems of complete free trade may be significant, but they are likely to be concentrated for the most part in central Canada. While the study remains to be updated to the 1980s, my impression is that the results are still valid in general terms with reference to Canada-U.S. trade.

Notes

This paper was completed in June 1984.

1. See Harris (1984a), (1984b), (1984c), and Cox and Harris (1983).
2. See Shoven and Whalley (1984) for a survey of their work and others on computable general equilibrium models.
3. This literature, the free trade debate and an extensive set of references are provided in Harris (1984a).
4. This view is most commonly attributed to Bela Balassa.
5. Currently we have a project underway to do a more realistic evaluation of Canada-U.S. sectoral free trade.
6. The literature on technological changes in scale economies is reviewed in Harris (1984d).

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Appendix

Further Calculations on Sectoral and Bilateral Free Trade

This is a summary, prepared by Roderick Hill and John Whalley, of a paper presented by David Cox and Richard Harris at the Research Symposium on Canada and the Future of the Global Trading System held on July 24, 1984 by the Royal Commission on the Economic Union and Development Prospects for Canada. The paper, "A Quantitative Assessment of the Economic Impact on Canada of Sectoral Free Trade with the United States," was presented previously at the 1984 Annual Meeting of the Canadian Economics Association at the University of Guelph. The symposium paper reports results from further work with the General Equilibrium Trade (GET) model described in the preceding paper by Harris.

In the symposium paper, Cox and Harris use their model to compare sectoral free trade (SFT) with a Canada-U.S. bilateral free trade (BFT) arrangement covering all industrial sectors. They define SFT as bilateral reduction in trade barriers between Canada and the United States in five industrial sectors: textiles, steel, agricultural machinery, urban transportation equipment, and chemicals. The purpose of their simulations is to obtain an estimate of the order of magnitude of the impact of SFT on the Canadian economy in terms of both the size of the gains and the sectoral reallocations that would result.

Sectoral free trade between two countries may offer benefits in the form of rationalization of the industrial structure on both sides of the border. This allows gains through both increased specialization and economies of scale as the volume of two-way trade expands. A further benefit comes from the pro-competitive effects of increased import competition, inducing further efficiency gains.

A general equilibrium model such as the GET model is particularly useful in assessing the likely magnitude of the effects of SFT. In addition to intra-industry rationalization and competition, inter-industry resource allocation can be expected. A general equilibrium approach is needed to capture these effects properly. The problem is further compounded by the presence of imperfect competition and scale economies in some industrial sectors. Without quantitative analysis, one cannot say that reduction of trade barriers in a few sectors will lead to an improvement in national real income, given the presence of trade and tax distortions in all of the sectors of the economy.

The model used to calculate the effects of SFT and the BFT case with which it is compared is essentially the same as that described by Harris in the preceding article. Instead of containing two regions (Canada and the rest of the world), it contains a three-region framework (Canada, the

United States and the rest of the world). Because of this, additional parameter values were required for the United States.

Also, some changes have been made to the data used earlier in the multilateral free trade simulations. Tariff levels between Canada and the United States were updated to the early 1980s. Estimates of some, but by no means all, non-tariff barriers (NTBs) and export subsidies between Canada and the United State are incorporated. But because it is difficult to estimate NTBs in tariff-equivalent form, the effects of such barriers as quotas on clothing under the Multi-Fibre Arrangement and the effects of Voluntary Export Restraints against Japanese autos do not appear in the data. Neither are the effects of government procurement policies incorporated, even though in the United States these are significant for urban transportation equipment, one of the sectors considered for sectoral free trade in the simulations.

General Results: Sectoral Free Trade Versus Bilateral Free Trade

The basic simulation results of Cox and Harris are reported in Tables 8-A1 and 8-A2. Table 8-A1 lists the aggregate results for complete bilateral Canada-U.S. free trade, covering all tariff and non-tariff barriers including export subsidies pertaining to trade between the two countries. Trade barriers against other countries are assumed to remain at their initial levels. Table 8-A1 also gives the same results for sectoral free trade covering the five sectors. Two sets of results are reported. One set of results is for an SFT arrangement which includes the mutual reduction of export subsidies and the other is for an arrangement which assumes that neither country eliminates its export subsidy programs.

The results indicate that Canada-U.S. bilateral free trade gives welfare gains of the order of 9.0 percent. This number is somewhat larger than the 8.6 percent reported above by Harris for multilateral free trade, although it is based on slightly lower tariff estimates. The larger number is clearly explained by the trade diversion effect due to the formation of a free trade area between Canada and the United States. As the small country in the arrangement, Canada will tend to benefit proportionately more by the diversion of U.S. imports from other countries to Canada than the United States will benefit from the diversion of Canadian imports from other countries. As Canadian industries are assumed to have unexploited scale economies, the increase in market size due to the diversion of U.S. trade to Canada will allow Canadian manufacturers to lower their production costs.

The extent of Canadian trade diversion is reported by the diversion index. This reports the proportion of total Canadian trade accounted for by the United States. In the base equilibrium, 71 percent of Canadian trade is with the United States. Under BFT this increases to 76 percent.

**TABLE 8-A1 A Comparison of Canada-U.S. Bilateral Free Trade with
Canada-U.S. Sectoral Free Trade: Results for Canada**

	Bilateral Free Trade	Sectoral Free Trade (without export subsidies)	Sectoral Free Trade (with export subsidies)
D-wage	0.283	0.057	0.069
D-productivity	0.299	0.043	0.053
D-scale	2.243	0.189	.263
Welfare/aggregate	0.090	0.015	0.019
Welfare/sectoral	—	0.404	0.503
D-trade volume	0.882	0.145	0.172
D-U.S. trade	.987	.136	.163
Diversion index	.764	.709	.710
Reallocation index	0.069	0.021	0.025
Sectoral value-added	8,193.65	8,499.93	8,861.087
Sectoral employment	.055	.065	.069
Sectoral net exports	− 5,916.56	2,894.31	3,991.28
D-firms (sectoral)	− .456	− .071	− 0.169

Notes: Bilateral Free Trade assumes that all tariff and export subsidies pertaining to bilateral trade between Canada and the United States are eliminated. *D-wage* is the relative change from base of the Canadian real wage (defined as the gross wage paid to suppliers of labour services deflated by an index of world prices); *D-productivity* is an index of average labour productivity across all sectors; *D-scale* is the relative increase in the average output per firm in the manufacturing industries; *welfare/aggregate* is the welfare gain measured by the Hicks equivalent variation as a proportion of base GNE; *welfare/sectoral* is the welfare gain measured as a percent of base value-added in the liberalized sectors; *D-trade volume* is the relative change in the aggregate volume of trade in all sectors measured as the value of exports plus imports; *D-U.S. trade* is the relative change in total volume of trade with the United States; the *diversion index* measures the proportion of total Canadian trade (volume) accounted for by U.S. trade; *reallocation index* is the proportion of the labour force required to shift intersectorally; *sectoral value-added* is measured in millions of 1976 Canadian dollars; *sectoral employment* is measured as share of total employment; *D-firms* is the average increase in the number of firms in the liberalized sectors.

In addition, the trade-creation effect of the free trade area is quite substantial. Under BFT the total volume of trade increases by over 88 percent, and trade with the United States increases by over 98 percent.

Cox and Harris found both forms of sectoral free trade to be surprisingly beneficial, given that all five sectors in total account for less than five percent of aggregate value-added in the base equilibrium. Assuming the SFT agreement prohibits export subsidies, the aggregate increase in real income is about 1.5 percent of base GNP. As a percent of value-added in the sectors covered by the agreement, the welfare gain is about 40 percent. These are significant gains and if export subsidies are left at their initial levels the gains are even larger.

While the aggregate effects of SFT estimated by Cox and Harris are substantially less than those of BFT, they are both generally in the same

direction. Thus, for example, aggregate real income rises, the wage rate increases, aggregate labour productivity improves, and trade volume increases. The 5 percent rise in the real wage is not large but agrees with previous results from the GET model that the major beneficiary from industrial free trade is the Canadian labour force. SFT requires about a 2 percent shift of labour between sectors, versus a 7 percent shift which would occur under BFT. It is clear the labour adjustment costs are substantially less under SFT than BFT.

Under either form of SFT the trade diversion effects are, not surprisingly, considerably smaller than under BFT. There is a 13.6 percent increase in the volume of trade with the United States, but the volume of trade with all other countries increases by almost the same amount. Thus the relative degree of economic integration of Canada with the United States versus the rest of the world remains about the same with SFT as without it. Sectoral free trade clearly also has a more pronounced positive impact than BFT on the trade surplus of the targetted sectors. Under BFT the five sectors run a trade deficit, while under either form of SFT they run a trade surplus. There is no welfare significance to this result, since all results refer to situations in which the balance of payments is in equilibrium.

Cox and Harris concluded that at the sectoral level SFT clearly favours the targetted sectors relatively more than under BFT. Sectoral employment rises under both types of trade liberalization, but with SFT the increase in employment is slightly greater than under BFT. More significant is the required adjustment in the number of firms. Under BFT 45 percent of the firms in the five sectors are eliminated in long-run equilibrium. Under SFT only about 7 percent of the firms are eliminated. This suggests that the types of intra-industry adjustments required under SFT are much less dramatic than under BFT. There is little evidence available to determine whether the social costs of these adjustments are significant or not.

Industry Results

Cox and Harris's specific industry results are reported in Table 8-A2. With the exception of agricultural equipment, both BFT and SFT lead to improvements in output, productivity, and employment in the targetted sectors. The distinguishing feature of SFT versus BFT is that (a) the relative change in industry outputs is less under SFT than BFT; (b) the productivity gains are much more dramatic under BFT than SFT, although in both cases they are significantly positive; and (c) the long-run intersectoral employment shifts are much less under SFT than BFT. BFT tends to imply a more highly specialized industrial structure. In particular the transportation equipment and paper and allied products sectors do quite well under BFT, due to significant scale economies in

these sectors and low labour/capital ratios in the base equilibrium. In contrast, under SFT neither of these sectors benefits to any significant degree.

Cox and Harris conclude from the results that from the Canadian point of view the five sectors used in the SFT simulation would appear to be good choices. However, an SFT agreement would require finding a number of mutually acceptable sectors. One cannot say whether the United States would find these desirable.

In reporting the resource misallocation cost of tariffs in models incorporating scale economies, the gains from tariff removal sometimes appear large in relation to the size of the sectors as measured by value-added. It is important to remember that scale economy gains are achieved not only on value-added, but also on the use of all intermediate goods. Under SFT the increase in production for the five sectors is on average about 62 percent. One of the reasons for doing a general equilibrium analysis is that cost efficiency gains in one sector have significant effects in other sectors. This shows up in the increase in the wage rate and the small but significant improvements in productivity in all the non-liberalized sectors reported in Table 8-A2. Higher wages in these sectors force some of the existing firms to shut down. Those firms which remain produce at larger scale and lower cost. In turn, these productivity gains contribute to gains already achieved in the liberalized sectors. It is the interactions between the liberalized and non-liberalized sectors that allow for the significant improvement in aggregate real income.

Export Subsidies

The simulations reported by Cox and Harris also explore the issue of the effects of the reduction or retention of export subsidies by both countries on their respective exports to each other. These are reported in Table 8-A1. The authors state that within the standard model of international trade for a small country facing a large country, the introduction of export subsidies by the large country results in a transfer of income from the treasury of the large country to the consumers of the imported good in the small country. Thus, Canadians would benefit at the expense of the U.S. taxpayer. This results in a decline in the price of imports relative to the price of exports, shifting production toward the export sector and away from the import-competing sector.

On the other hand, export subsidies by a small price-taking country have no effect on the equilibrium world price of the exported commodity. Export subsidies cause a fall in the domestic price of exports and an increase in the relative price of imports. The income transfer goes from small country taxpayers to large country consumers. Production shifts from the export sector to the import-competing sector. Thus, export subsidies are similar to tariffs in their general equilibrium effects.

**TABLE 8-A2 Industry Performance and Rationalization:
Sectoral versus Bilateral Free Trade**

	Bilateral Free Trade			Sectoral Free Trade		
	D-output	D-prod	D-empty	D-output	D-prod	D-empty
<i>Target Sectors</i>						
Textiles	2.394	0.325	1.561	1.777	0.139	1.438
Steel	0.209	0.225	-.013	0.294	0.071	0.208
Agricultural Equipment	-.122	0.197	-.267	-.058	0.038	-.093
Urban Transportation Equipment	0.614	0.259	0.282	1.973	0.100	1.703
Chemicals	0.227	0.223	0.004	0.181	0.073	0.100
<i>Other Industrial Sectors</i>						
Food & Beverages	0.245	0.274	-.023	0.015	0.043	-.027
Tobacco	0.277	0.423	-.102	0.018	0.042	-.023
Rubber	0.369	0.305	0.049	0.052	0.048	0.004
Leather	0.242	0.347	-.078	-.016	0.046	-.059
Knitting	1.069	0.396	0.482	0.166	0.058	0.102
Clothing	4.782	0.609	2.592	0.057	0.056	0.001
Wool	0.145	0.313	-.128	-.028	0.039	-.064
Furniture	-.157	0.361	-.381	0.003	0.047	-.042
Paper & Allied Products	0.598	0.218	0.313	-.003	0.039	-.039
Printing	0.354	0.202	0.127	0.010	0.038	-.026
Metal Fabrication	0.135	0.232	-.079	0.023	0.046	-.022
Non-Agricultural Equipment	-.194	0.232	-.346	-.050	0.045	-.092
Transport Equipment	1.012	0.268	0.587	0.034	0.033	0.001
Electrical	-.015	0.273	-.227	-.005	0.044	-.048
Non-metal Minerals	0.209	0.227	-.014	0.008	0.035	-.026
Petroleum	0.238	0.340	-.077	0.036	0.052	-.015
Miscellaneous Manufacturing	-.184	0.223	-.332	-.016	0.047	-.060

Source: David Cox and Richard G. Harris. "A Quantitative Assessment of the Economic Impact on Canada of Sectoral Free Trade with the United States." A paper presented at a Macdonald Commission Research Symposium on Canada and the Future of the Global Trading System, held on 24 July 1984, in Ottawa. Table 3.

Note: Both trade liberalization experiments assume the removal of export subsidies on the appropriate trade between Canada and U.S. industries. *D-output* refers to the relative change in industry output over base. *D-prod* is the relative change in industry labour productivity over base. *D-empty* is relative change in industry employment over base.

With imperfect competition and scale economies, there are some additional effects to consider. A subsidy on an industry with price above marginal cost has two positive efficiency effects. First, with monopolistic pricing behavior the monopolist lowers price and this results in a shift of resources into the monopolistic sector. This can improve national welfare if little of the transfer effect of the subsidy leaks abroad. Second, with scale economies the increased output means that average cost is lowered, and this results in a productive efficiency gain. Both of these effects are complicated by the possibility of additional entry, but the general idea is still valid. Thus, for the small country these possible efficiency gains from export subsidies can outweigh the efficiency losses and lead to a national welfare improvement.

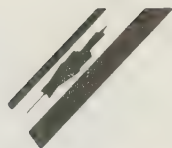
The model can be used to estimate which of the different effects on resource allocation is the most significant. From Cox and Harris's results, shown in Table 8-A1, it would seem that Canadian real income is higher if export subsidies are not removed. Given the relatively low level of Canadian subsidies, the dominant effect on Canada is undoubtedly the impact of either maintaining or removing U.S. export subsidies. There is a transfer from the U.S. treasury to Canadians which is lost if the subsidies are removed. The larger the increase in U.S. exports to the Canadian market achieved through trade liberalization, the greater the income transfer. There is also a terms-of-trade effect. Sectoral net exports under SFT are larger with the U.S. subsidies in place than without them.

Cox and Harris warn, however, that these results should be interpreted cautiously, as the level of Canadian export subsidies used in their data may be too low. The results could change if these estimates were raised.

Conclusions

While the exact numerical results must be interpreted with caution due to the poor quality of some of the data used, some general conclusions do emerge. First, there appear to be surprisingly large benefits to liberalizing trade on a bilateral basis in the textile, steel, agricultural equipment, urban transportation equipment, and chemical sectors. While the real income gains are much smaller than a bilateral free trade arrangement would yield, the intersectoral and intra-industry adjustments required are also correspondingly smaller.

Second, with SFT the "target" sectors fare much better than under a BFT agreement. Third, U.S. export subsidies seem to be of considerable importance in assessing the overall impact of SFT. Canadians would have little incentive to bargain for the elimination of these subsidies.



The Relationship Between Trade and Tariff Patterns and the Efficiency of the Canadian Manufacturing Sector in the 1970s:

A Summary

JOHN R. BALDWIN AND
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Introduction

Canada is a small open economy with trade playing an important and increasing part in the nation's prosperity. Traditional trade theory has stressed the connection between, on the one hand, the free flow of products and factors and, on the other, specialization by a country in those industries in which it has a comparative advantage. In this world, industry structure and productivity are generally exogenous. However, Canadian economists have long been interested in the feedback effects of protection on the efficiency of an industry. At first this interest focussed on structural characteristics such as plant size, which was thought to be related to efficiency (Eastman and Stykolt, 1967). More recently (Caves et al., 1980; Saunders, 1980), this literature has been extended to examine the impact of trade, or more appropriately the lack of impediments to trade, upon Canadian productivity relative to the United States — Canada's major trading partner. These are essentially applied industrial organization studies that treat external trade as one of a number of influences that affect industry structure and performance.

The literature that combines aspects of both industrial organization and trade has an important bearing upon the debate about the effects of free trade upon Canada. For if protection has detrimentally affected plant scale and efficiency, then the effects of a continued reduction in the impediments to trade cannot be analyzed simply by examining the present disadvantages suffered by Canadian industry. More importantly, tariff reductions may be accompanied not so much by the elimination of an industry as by its adaptation to larger plant scale and more efficient production technology. While part of the industry may disappear as a

result of trade liberalization, a large and competitive segment may remain after the adjustment process is completed.

Concern about the effects of trade liberalization stems from a number of preconceptions about the ability of Canada's manufacturing sector to compete in international markets. The theme that size places Canadian firms at a disadvantage can be found throughout the report of the Royal Commission on Corporate Concentration (Canada, 1978). Size disadvantage at the plant level could result from Canadian plants being small relative to Canada's chief trading partner, the United States, or from excessive product diversity. Even if Canada's plants were on average about the same size as U.S. plants, they could be producing an excessive number of products and thus have production runs per product that were not sufficient to exploit economies at the product as opposed to the plant level.

Associated with and indirectly related to plant scale disadvantage and excessive product diversity are the concerns expressed by some that Canadian industry is not as productive as that of our major trading partners, in particular the United States. Implicit in many of the statements that Canada could not compete in a world of free trade is the notion that we are not as efficient, though the relationship between standard partial productivity measures (output per worker) and efficiency is often left somewhat vague. For example, it is not uncommon to find comparisons of the unit labour cost of output that show Canada to be a high cost producer of manufactured goods. This is, of course, just a modification of the commonly used labour productivity measure — with relative wage costs added. The disadvantage as demonstrated by this ratio could stem from several sources. First, it could arise from technical inefficiency if Canadian industry operated below the best-practice production frontier. Second, it could stem from allocative efficiency if Canadian factors were combined in relative proportions that did not reflect cost-minimizing behaviour in light of relative factor costs or at least were combined in a less efficient pattern than that of our major trading partners. Third, it could be the result of high factor costs associated with a Canadian comparative advantage that lies elsewhere than in manufacturing. Fourth, it could simply be because Canada is at a different point on a production frontier that exhibits economies of scale. With economies of scale and a small market, Canadian industry may simply require relatively large units of input per unit of output (the inverse of standard productivity measures) but not be inefficient in a technical sense.

Previous work on plant-scale disadvantages and the Canada/U.S. productivity gap has left a number of issues unresolved. The extent and the importance of the plant-scale disadvantage is not commonly agreed upon. The importance of the plant-scale disadvantage will depend upon the cost disadvantage of operating small plants. Knowledge of the latter

requires an estimate of the industry cost or production function that can be used to calculate the costs of sub-optimal plant size. But industry production functions need establishment data that are not readily available — at least across many industries. We have approached this deficiency in the literature by using Canadian Census of Manufactures establishment data to estimate individual production functions at the four-digit Standard Industrial Classification (SIC) level of aggregation.

Not only is the importance of the Canadian plant-scale disadvantage unresolved, but its very extent is not well established. While several studies have dealt with the issue, they suffer from a number of problems. Eastman and Stykolt (1967), Gorecki (1976) and Scherer et al. (1975) examine only a small number of industries. Those which examine a larger set of industries (Gupta, 1979; Dickson, 1979) focus on Canada alone, without comparing Canadian experience to some international standard. We attempt to rectify this deficiency in the existing literature by developing data on plant size for a large sample of Canadian industries — 167 — at the four-digit SIC level of aggregation and by matching them to comparable U.S. industry data so that we have a basis for establishing the extent of Canadian plant-scale disadvantage.

The existing documentation of the extent to which plants are excessively diversified is as unsatisfactory as that on plant scale. There are at least two reasons for this. First, it is difficult to separate plant scale from product-line economies, given the nature of the data available for large cross-sectional studies. Large plants tend to have longer production runs and the two scale effects are not easily separable. Moreover, if plant-scale economies outweigh product-line economies, it is conceivable that product packing (that is, excessive diversity) is optimal if more is gained by way of plant-scale economies than is lost by way of production run (length) economies. Second, up to now, evidence on plant-level product diversity has been available primarily through expensive interview techniques and therefore has been limited in extent (for example, Daly, Keys and Spence, 1968). In order to investigate the diversity issue, we develop measures of plant diversity using information on the number of products produced in each plant that is available on the Census of Manufactures questionnaire but has not previously been used in quantitative analyses.

Previous productivity studies of Canadian industry also leave a number of issues unresolved. First, there are few that focus on productivity differences at a relatively disaggregated level. Without such studies, it is difficult to know whether the whole manufacturing sector is inefficient or whether Canada's manufacturing industries cover the gamut from relatively inefficient to relatively efficient. Second, there are even fewer studies that cover a large number of industries and link plant-scale disadvantage to Canadian productivity disadvantages; studies that examine whether the differences in relative productivity measures

among individual industries disappear when the scale effects of having small plant size are properly incorporated into the analysis. Bernhardt (1981) uses cross-sectional regression analysis to “explain” relative Canada/U.S. productivity but relies on a data sample of only 15 matched industries. Caves et al. (1980) and Saunders (1980) have some 80 matched industries but have to rely upon very rough estimates of the importance of scale economies. Moreover, none of these studies uses the appropriate theoretical framework to derive the link between the Canadian productivity disadvantage, relative plant scale and the importance of scale economies.

In our work, we use a somewhat more rigorous framework relying upon production theory to specify the a priori relationship we would expect between relative Canada/U.S. productivity, relative plant scale, and scale economies. We then use estimates of scale economies that are derived from estimates of the production function at the industry level for each of our 167 four-digit industries. This allows us to “correct” partial labour productivity measures for different factor intensities and different plant sizes in the face of scale economies. As a result, we estimate how much of the Canada/U.S. difference in relative productivity is accounted for by plant-scale disadvantage.

While we focus first on the extent of plant-scale deficiencies, the extent of plant-level diversity, and a measure of relative Canada/U.S. productivity, we also ask whether inter-industry variations in each of these are related to certain structural characteristics of the industry (such as concentration or regional fragmentation), the degree to which the industry is open to world trade (its export intensity or the tariff levels) and certain other characteristics sometimes said to influence Canadian industrial performance, such as the degree of foreign ownership or the amount spent on research and development. For this purpose, we use cross-sectional regression analysis.

The Kennedy Round of tariff cuts (begun in 1966) reduced the average nominal tariff rate for the manufacturing sector from 11.9 percent in 1966 to 7.8 percent in 1978 (Economic Council of Canada, 1983). Effective tariff rates fell from an average of 16.4 percent to 11.7 percent over the same period. Just as significant, the percentage of imports not subject to duty increased from 35.4 percent in 1970 to 45.8 percent in 1979. A substantial increase in the importance of trade accompanied these tariff reductions. Exports as a percentage of domestic shipments in the manufacturing sector increased from 18.8 percent in 1966 to 30.4 percent in 1978. Imports as a percentage of the Canadian market increased from 21.0 percent to 31.6 percent over the same period. Since these changes have increased the degree to which the Canadian economy is open to foreign competition, we have the opportunity to investigate the extent to which Canadian industry has adapted.

Our primary interest is in the effect certain trade variables have in explaining inter-industry variability in relative Canada/U.S. plant scale, Canadian average plant diversity, and Canada/U.S. relative productivity (corrected for plant-scale effects). To do this, we focus on two points in time for which we can develop a matched data base of Canadian and U.S. industries, the early and the late 1970s. We develop a data base at the four-digit SIC level for the manufacturing industry. At this level there are 167 industries, although in the individual studies we use between 108 to 135 industries, after “miscellaneous” industries and those where data problems emerged are eliminated. This leaves us with a more extensive and more complete sample than has been previously used.¹

Cross-sectional regression analysis then is used on this data base to “explain” the inter-industry variability in the variable of interest. Provided that the process of adjustment to changes in the environment (tariffs) occurs relatively quickly, or the explanatory variables used in the regression analysis (trade intensity) change very little over time and the adjustment process has been completed by the period chosen for analysis, a cross-sectional analysis, such as that undertaken by us, can be taken to represent the long-run equilibrium and the estimated coefficients taken to be long-run elasticities. Generally, the assumptions necessary for such interpretations of single-point-in-time cross sections are not tested — though more recently the pooling of consecutive cross sections has increased our ability to examine the short-run adaptation process.

We adopt the strategy of looking at two periods — the early and late 1970s. In 1970, many of the Kennedy Round tariff reductions had been implemented but industry had probably not yet fully adapted to these reductions. By 1979, the adaptation process, at least to the Kennedy Round, should have been made complete. A comparison of the cross-section regression results for the two years allows us to examine how robust our results are. As such, the cross sections for 1970 and 1979 allow us to examine the adjustment process. We also look at changes in our dependent variables over the decade and use the same set of explanatory variables, in appropriate first difference form, to see whether the short-run (one decade) adjustment process accords with the long-run results yielded by our 1970 and 1979 regressions.

In this paper, we summarize our findings of the impact of imports, exports and tariffs on Canadian relative plant size, plant diversity and relative efficiency.² Since our benchmark for the plant size and efficiency analyses is the United States, the results are, as we argue, likely to be particularly relevant to Canada/U.S. trade issues. More detailed results may be found in a series of Economic Council of Canada discussion papers and a monograph, *The Role of Scale in Canada/U.S. Productivity Differences in the Canadian Manufacturing Sector in the 1970s*, published jointly by the Economic Council and this Royal Commission.

Plant Specialization

One of the most persistent themes of previous studies on the Canadian manufacturing industry is that production runs are too short because of the smallness of the Canadian market, lack of competition, tariff protection, and other factors. In other words, the typical plant produces too many different products. As tariffs have been lowered over the past decade and a half, Canadian plants have become subject to competition from firms located in other countries such as the United States. Because the latter enjoy a larger and more competitive market, these firms are likely to realize all the scale economies afforded by longer production runs. Hence Canadian plants should have adapted to increased import competition from these firms by lengthening production runs and reducing the number of products per plant.

Because of the lack of data, it has been difficult until now to come to grips empirically with the question of product diversity. Most of the earlier work, such as that conducted in the late 1960s by Daly, Keys and Spence on behalf of the Economic Council, relied on the opinions of businessmen and other data gathered by interview, while later work was conducted at the industry level rather than at the product or commodity level. The special data base created for the project makes it possible, for the first time in Canada, to address the issue directly by measuring product heterogeneity based on actual “census plant” data.

Product diversity and length of production run at the plant level were measured with the use of the industrial commodity classification (ICC) system, which defines a four-digit industry in terms of the products or commodities classified to that industry. Two levels of the ICC were used to measure diversity, with one system being two to three times as detailed as the other. The more detailed classification system divides the manufacturing sector into 6,126 commodities, compared with 167 four-digit industries. While the ICC may not be so detailed as to catch differences right down to the product-line level, it is likely to differentiate between products with important associated cost differences, because of the manner in which the classification is derived. This classification uses mainly supply-side criteria — such as whether products are made from similar raw material or are generally processed in the same plant — that should catch the most important heterogeneity in the production process. The measures of product diversity and production-run length attempted to capture both the number of products manufactured in the plant and their relative importance. Both are based on a Herfindahl Index.³

Over the period from 1974 (the first year for which the output profile of plants on a product basis is available in machine readable form) to 1979, the average length of production run, measured in 1971 constant dollars at the plant level, across more than 120 Canadian manufacturing indus-

tries, increased substantially. Product diversity declined by several percentage points as plants became more specialized. Hence, as output has grown and the importance of international trade increased, plants have tended to concentrate on their existing product lines.

The study of diversity at the plant level was taken a step further by the introduction of information regarding the country of control of the plant — Canadian, U.S. and other foreign-owned — because it is frequently claimed that one of the impacts of foreign direct investment is to exacerbate Canada's scale and specialization problems, the so-called miniature replica effect. In 1974, Canadian-owned plants, across the manufacturing sector as a whole, were unequivocally more specialist than their similar-sized U.S.-owned counterparts in Canada in almost every size grouping, but by 1979 this difference was less pronounced. The finding for 1974 accords with previous work (Caves 1975) for approximately the same time period. However, when both the number of commodities classified to each of the 167 four-digit industries and plant size are controlled for, these findings are not replicated. Indeed, in the preponderance of cases, U.S. plants are more specialist than Canadian ones. It would therefore appear that previous findings were the result of U.S.-owned plants being relatively more concentrated in industries with more products and Canadian-owned plants in industries with fewer products. Moreover, this suggests a possible source of the productivity disadvantage of Canadian-controlled plants that Globerman (1979) has reported.

In cross-sectional regressions that examine the influence of trade and tariffs on product diversity and length of production run, a number of different variables are used to "explain" inter-industry variability in these dependent variables. The most important of these turns out to be plant size. Our results show that larger average plant size is associated with greater product diversity, but the rate of increase in product diversity slows as average plant size increases. This suggests that plants add product lines to exploit plant-scale economies but that the advantages of doing so are limited. If so, growth of market size brought about by trade liberalization will eventually solve the product diversity problem, for, as we discuss below, market size is the primary determinant of plant size. While plant rationalization could be used to reduce the "diversity problem," it does require a degree of government intervention that is likely to be difficult to accomplish without undesirable side effects on competition.

We also find that in industries characterized by both high tariffs and high concentration — that is, industries where the impact of trade barriers is often thought to be most pervasive — production runs were shorter and product diversity greater. Hence the tariff in these industries served to reduce efficiency. Tariff protection in the absence of concentration did not have a clear and uniform effect in the 1970 and 1979

regressions. Nevertheless, falling tariffs over the 1970s led to increased length of production run in the first difference regression (1979–70). The trade variables were usually insignificant in explaining product diversity and length of production run in 1970 and 1979, but when changes in the average length of the production run over the decade are examined, we find that a rise in imports increased the length of production run. Although the trade variables had little direct impact on product diversity and length of production run, there were indirect trade impacts via the effect of these variables on relative plant size, a topic to which we now turn.

Canada/U.S. Relative Plant Scale

Just as familiar as the concern about short production runs is the worry that plants in the manufacturing sector are too small to realize all the available scale economies — that they tend to be smaller than the minimum efficient size (MES) plant. As with short production runs, the tariff, combined with the small size of the Canadian market, is believed to be responsible for this sub-optimality problem. It has been argued that trade liberalization might improve this situation.

In discussing plant size, our attention is concentrated upon the size of larger Canadian plants relative to larger U.S. plants. The latter have been used in other studies (Caves et al., 1980) as a proxy for minimum efficient size. The U.S. measure is used here as a standard of comparison since the U.S. market, because of its size and competitiveness, is not subject to the same constraints that result in Canada's scale and specialization problems. At the same time, the geographical closeness of the United States, combined with similar tastes, a common language, and significant U.S. ownership of Canadian industry, ensures that the U.S. experience is relevant to Canada. Finally, the United States is Canada's major trading partner and therefore is often used as the benchmark with which to compare Canada's level of productivity.

Our findings on relative plant scale, the ratio of larger Canadian to larger U.S. plants,⁴ show that on average across 125 comparable Canadian and U.S. manufacturing industries, this ratio was approximately 0.7 during the 1970s. Thus there may be a scale problem of some importance if cost disadvantages are related to scale disadvantage, as many suggest. One problem with such average ratios is the implicit assumption that plants larger than the MES somehow offset instances where the converse is the case. However, average or unit costs greater than the MES are generally assumed to be constant. Hence, a second measure of relative plant scale is performed with all values set to unity where Canadian plant scales were greater than the U.S. proxy of the MES plant. The resulting average ratios are found to have been approximately 0.6 during the

1970s. This suggests that the Canadian plant-scale disadvantage is of more significance than the simple average implies.

The methodology used in examining the impact of trade and tariffs on relative plant scale is the same as that used above for product diversity. We use cross-sectional regression analysis to examine the determinants of relative plant scale in 1970 and 1979. This allows us to examine how the importance of these factors changed over the period. We also use a first difference cross-sectional regression to examine the determinants of the change in plant scale over the decade.

Our statistical analysis shows that one of the major determinants of relative plant scale in 1970 and 1979, and over time, was the size of the Canadian market, both domestic and export sales. The larger the market, the greater the value of relative plant scale. The coefficient attached to the market size variable implies, other things being equal, that if Canada were to form a bilateral free trade area with the United States, predicted increases in the size of the market available to Canadian industry would raise the mean value of the relative plant scale index to unity; in other words, larger Canadian plants would be, on average, the same size as larger U.S. plants. Structural disadvantage is therefore endogenous, the result of present trade restrictions.

In addition, we find that tariffs led to smaller Canadian plant sizes compared with those of U.S. plants, but only where tariffs were high and combined with high industry concentration. A decrease in tariffs under such conditions resulted in an increase in the relative plant scale. Exports in those industries in which Canada has a comparative advantage were associated with the building of plants closer to the MES. On the other hand, increasing imports reduced plant sizes in Canada relative to those in the United States.

In the previous section, we report that increases in imports resulted in a decline in diversity and increased length of production run. These results taken together suggest that Canadian plants, when facing import competition, become smaller and carve specialist niches in the marketplace instead of adding even more products to offset the loss in plant-scale economies resulting from declining sales in their primary product lines.

In sum, tariffs have had the expected impact, but only in concentrated industries, while exports have been associated with an increase in plant size relative to the MES. As for imports, they did not result in increased plant size, but they did result in smaller, more specialized plants. Hence, trade affects product diversity and length of production via its impact on relative plant scale. Foreign investment has had no measurable impact on relative plant scale, a result similar to that found for product diversity and length of production run.

Canada/U.S. Relative Efficiency

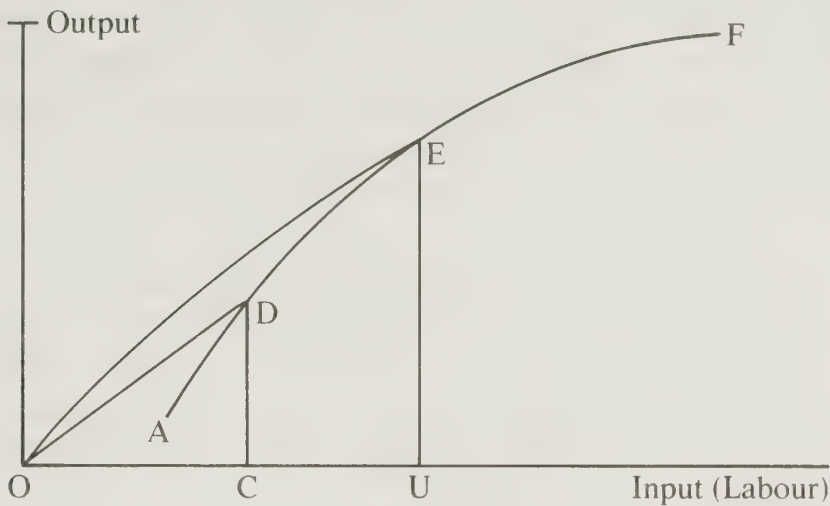
The final efficiency indicator examined is the level of Canada/U.S. relative productivity, or the relationship between inputs (plant and equipment, workers, and management) and output (as measured by value-added). Productivity increases when the ratio of output to input increases. Increases in productivity in the long run are associated with increases in the real living standards of Canadians.

As with our examination of plant scale, we use the United States as the benchmark against which to measure Canada's productivity performance. We estimate two measures of productivity. Both measures are total factor productivity indices. That is, they consider not just labour but also capital inputs. Indices such as these are more appropriately called relative efficiency measures. In effect, they can be regarded as correcting the commonly used value-added-per-worker measures for the fact that the two countries may be at different points on the same production function, either because plants are of different average size in the two countries or because relative factor intensities differ. They thus measure residual differences in productivity after taking into account the above-mentioned considerations. Any remaining differences are thus ascribed to "efficiency" differences.

Two countries may be characterized as equally efficient in transforming inputs into outputs. They may both utilize the same production function but differ substantially in terms of the amount of output obtained per unit of input, a commonly used definition of productivity. When economies of scale are present, a country with a small market may produce efficiently in the above sense but require more inputs per unit of output (that is, it has a lower measure of productivity) because of scale disadvantages. Therefore, we report two measures of Canada/U.S. relative efficiency. The first does not take into account the effect of smaller Canadian plant size and the importance of scale economies. The second corrects the relative efficiency measure for the economy-of-scale effect.

The difference between the conventional measure of relative productivity that does not consider scale economies and the measure of relative efficiency that can be usefully illustrated with reference to Figure 9-1. In Figure 9-1, we assume that there is only one factor input (labour) and that both countries operate on the same production frontier (AF). Canada uses OC units of labour to produce CD units of output; the United States uses OU units of labour to produce UE units of output. Since both countries are operating on the same production frontier, they are equally efficient. But the conventional labour partial productivity measure would indicate greater productivity for the United States; since $EU/OU > CD/OC$. The scale-corrected efficiency measure in this case would be unity, since both countries are on the same production frontier.

FIGURE 9-1 The Relationship Between Output and Input, Canada and the United States



In order to estimate the scale-corrected total factor productivity measures, we estimate individual production functions for each of the Canadian four-digit SIC industries using data on individual establishments. Using the information so derived, we then calculate the scale-corrected measures of total factor productivity that consider both labour and capital inputs. An exercise such as this is potentially fraught with error because of measurement problems. Nevertheless, after experimenting continuously with alternate methods based on various assumptions, we find that our results are generally robust. The one area where the results do depend significantly on the assumption made is in the aggregation procedure used to go from the microproduction function at the establishment level to the macroproduction function in aggregate industry variables, that is total output, total labour and total capital. It is the latter variables that are used to compare overall industry productivity.

The uncorrected relative efficiency measure indicates that Canada has a level of efficiency equal to about 70 percent of that of the United States. If the individual microproduction functions are assumed to apply directly at the macro level, then our scale-corrected relative efficiency measure suggests that Canadian industry on average is equally efficient as that of the United States. However, there are good reasons to suspect that the microproduction function does not apply at the macro level (Sato, 1975). Therefore an alternate approach may be used that relies upon the assumption that individual plant sizes in an industry are distributed lognormally. In this case, our scale-corrected measure of relative efficiency accounts for about one-third of the difference in the conventionally measured productivity gap between Canadian and U.S. manufacturing sectors. Thus scale effects are important, but there is a residual efficiency gap that still remains after plant-scale differences and the importance of scale economies are taken into account.

Turning to the cross-sectional regression of inter-industry variability in relative Canada/U.S. efficiency, an explanation in terms of non-scale-related variables is needed, since the scale effects are already incorporated in the efficiency measure. One solution may be found in the hypothesis of De Alessi (1983) that the attenuation of property rights or an increase in transactions costs leads to “shirking” or X-inefficiency. This theory argues that monopolists face higher transaction costs and less optimization pressure while X-inefficiency is higher in less competitive markets. Hence, markets protected from import competition, particularly where high tariffs or natural barriers are combined with concentration, are subject to lower relative efficiency.

The most consistent finding of our regression equations is that higher import penetration is associated with greater Canadian relative efficiency. Hence the openness of the Canadian economy positively affects Canada’s relative efficiency. While the importance of trade therefore comes through, virtually nothing else does. In particular, foreign ownership does not have a negative effect on relative efficiency, as Saunders (1980) finds, nor does concentration, the size of the market or the regional nature of the industry. The null hypothesis that the lack of competition is an important determinant of X-inefficiencies is therefore not borne out except with respect to trade variables.

This should not be interpreted to imply that answers cannot be found to explain the gap in efficiency — just that the standard variables that are often said to be important, such as foreign ownership, concentration and research and development expenditures, do not have a uniform effect in the cross section. There are therefore no general policy instruments (apart from trade policy) that can be relied upon to improve Canadian productivity. There is, of course, still an efficiency gap, but the explanation for it probably requires individual investigations at the industry level to determine the factors that are relevant for each sector.

Conclusion

The research summarized in this paper concentrates upon the impact of trade and tariff levels and changes during the 1970s, upon relative plant scale, product diversity, length of production run and relative efficiency. Where possible, the benchmark against which Canada is compared is our close neighbour and biggest trading partner, the United States. Our work provides evidence that commonly perceived structural and productivity (efficiency) disadvantages are partially the result of impediments to free trade. Thus, trade does matter. Trade directly impacts upon relative plant scale and hence indirectly upon product diversity and relative efficiency. In particular, in industries characterized by high tariffs and high concentration, plant sizes are smaller and product diversity greater compared with industries elsewhere in the manufacturing

sector. But barriers to trade also have a negative effect on relative efficiency. In sum, a strong argument can be made that the trade liberalization process over the postwar period has improved the competitiveness of Canadian industry and that continued emphasis on a reduction of trade barriers or their maintenance at present low levels would serve to improve our competitiveness.

Notes

An earlier version of this paper was presented at the Symposium on Domestic Adjustment to Trade Policy Changes and External Shocks held by the Royal Commission on the Economic Union and Development Prospects for Canada on January 27, 1984, Ottawa. This revision was completed in December 1984. Some of the material reported herein appears in Economic Council of Canada, *The Bottom Line: Technology, Trade and Income Growth* (Ottawa: Minister of Supply and Services Canada, 1983.) However, all the views expressed herein do not necessarily reflect those of the Economic Council.

1. The study by Caves et al. (1980) uses matching Canada-U.S. industry data for the late 1960s. While it has some 80 matched industries, many of their variables contain missing observations because of Statistics Canada publishing rules. Our studies do not suffer from this problem because, with the help of Statistics Canada, we are able to build a comprehensive data base on 167 industries at Statistics Canada which can be used for the analysis and yet not violate confidentiality rules.
2. See Baldwin et al. (1983a, 1983b, 1983c, 1983d) and Baldwin, Gorecki, and McVey (1984) for work on the effect of trade on the entry and exit process, plant scale, plant diversity and concentration. The work on relative efficiency of Canadian manufacturing industries is to be found in Baldwin et al. Our forthcoming monograph will contain a more extensive discussion of the efficiency and productivity issue. The discussion in the sections on plant specialization and Canada-U.S. relative plant scale draws heavily upon a report by the Economic Council of Canada (1983). We should like to thank David Slater, Chairman of the Council, for permission to use this material.
3. The measure of product diversity at the industry level is estimated as follows. For each plant in the industry, a Herfindahl Index is calculated (i.e., the sum of the squares of the share of the plant's output accounted for by the i th commodity); these individual plant indices are then summed, with the weights being the share of plant's total sales in industry total sales. Production run length is average industry plant size divided by the reciprocal of the industry product diversity index.
4. Large plants in both countries are defined as those which account for the top 50 percent of employment. This definition also corrects for different coverage in the census of the two countries with respect to small plants.

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The Impact of Trade Liberalization on Foreign Direct Investment Flows

DAVID F. BURGESS

How does trade liberalization between Canada and the United States affect the pattern and volume of foreign direct investment flows? Is a mutual reduction in trade barriers (tariffs, quotas, government procurement policies, and so on) likely to stimulate or deter foreign direct investment flows between the two countries? How will foreign direct investment flows to and from the rest of the world be affected?

This is a very interesting question, and for many Canadians the answer may be crucial in their assessment of the wisdom of trade liberalization itself. Therefore, before outlining the various factors that are probably involved, I would like to state that in my opinion the precise manner in which freer trade between the two countries affects foreign direct investment flows, although of obvious interest and importance, should not be decisive in determining whether trade liberalization is a good thing or a bad thing for Canada. I believe that freer trade with the United States will yield significant tangible net economic benefits for Canada as a whole (such as higher per capita real incomes measured in terms of privately appropriable goods and services) whether foreign direct investment flows expand or contract as a consequence. If foreign direct investment (FDI) is judged to be desirable, then it is optimal policy to subsidize it directly (or, if it is undesirable, to tax it) and not to control it indirectly by manipulating trade barriers.

In order to understand how trade liberalization affects FDI, we had better understand what it is and why it occurs. FDI occurs when a citizen of one country — or a corporation whose ownership resides in one country — decides to acquire a controlling interest in, or to enhance a controlling interest in, a production facility located in another country. FDI reflects a transfer of equity capital between countries, but it is equity with control attached. Thus it is not enough to explain FDI in terms of

differential rates of return on equity capital across countries. It is also necessary to explain why foreigners are prepared to outbid residents for the controlling interest in productive assets even though domestics presumably have a better knowledge of how to apply these productive assets to local market conditions.

The stock of FDI assets can grow either because a foreign corporation or individual decides to acquire an additional equity interest which confers control, or because some of the earnings on existing FDIs are retained and reinvested. Since the capital account of the balance of payments records the former but not the latter, official FDI flows do not reflect the actual changes in the stocks of FDI assets between countries. This is important because balance of payments statistics indicating that FDI inflows into Canada have been less than FDI outflows since 1973 do not imply that Canada is gradually transforming itself from a net debtor to a net creditor in FDI assets. The annual increase in FDI assets in Canada is likely to dominate the annual increase in Canada's FDI assets abroad for many years to come, because of the much larger contribution of retained earnings on foreign investments in Canada compared to the retained earnings of Canadian investments abroad. Therefore, measured FDI flows as recorded in balance of payments statistics are quite distinct from actual changes in the stock of FDI assets that reflect the foreigner's contribution to capital formation in the domestic economy.

Despite its long history as an issue in the public policy debate, the notion of U.S.-Canadian trade liberalization remains fuzzy and imprecise. Do we mean freer trade in certain sectors of the economy but not in others? Or do we mean across-the-board reductions in trade barriers in all sectors? Do we mean tariff cuts only? Or do we mean cuts in all sorts of trade barriers? If we interpret U.S.-Canadian trade liberalization to mean a mutual reduction in all sorts of trade barriers on manufactured goods between Canada and the United States, then it is reasonable to assume that a bilateral movement toward freer trade with the United States is a feasible and attractive option for both countries. This could be accomplished without Canada's sacrificing autonomy over its natural resources and energy supplies. Thus, Canada could retain the right to regulate the amounts of the natural resource products and energy available for export (and therefore the amounts produced) while giving the United States priority access to whatever supplies are deemed available for export. In particular, trade liberalization in manufactured goods could be pursued between the two countries without a Canadian commitment to any sort of continental energy policy.¹ This means that direct investment flows between the two countries in the resource sector can be taken as given and as independent of trade liberalization.

There is a view that trade and foreign direct investment are substitutes for one another — at least for the horizontal direct investments that characterize the manufacturing sector. Assume that a firm has an intan-

gible asset (for example, a patent, a brand name, or superior technical expertise or marketing skills) that can be applied to the foreign market at minimal extra cost. Is the return from this intangible asset maximized by expanding home production and exporting to the foreign market, or by establishing a production facility abroad?² To some extent, the answer depends on the height of tariffs and other trade barriers between the two countries. Higher tariffs may tip the balance in favour of establishing a branch plant inside the tariff wall rather than exporting over it. The view that the Canadian tariff has, either deliberately or inadvertently, induced foreign firms to locate branch plants in Canada has long been expressed. That Canada owes its foreign ownership “problem” to its protective commercial policy is part of the conventional wisdom.

Standard general equilibrium trade theory portrays FDI as strongly sector-specific and as the major vehicle for equalizing rates of return to capital within a given sector across various countries. According to this literature, trade and foreign direct investment flows are substitutes at the level of the individual sector but they may be either substitutes or complements at the level of the total economy. Tariffs raise rates of return to capital in protected sectors and attract mobile resources such as labour from the rest of the economy, which tends to lower rates of return to capital there. Tariffs therefore cause commodity trade to shrink by diverting resources from their comparative advantage allocations. But tariffs also encourage FDI inflows into protected sectors and tend to deter FDI inflows into (or encourage FDI outflows from) unprotected sectors, with no presumption that total FDI inflows will be encouraged or discouraged on balance.

Using a version of this model, I have argued elsewhere that the Canadian tariff may have encouraged FDI inflows into the protected secondary manufacturing sector while leaving FDI unaffected or possibly even increasing FDI inflows into the unprotected primary sector.³ The reasoning is as follows. The overall return to specific factors in the primary sector is decomposable into a genuine return to capital and a residual rent to natural resources (land). Whenever capital and labour are closer substitutes than land and labour in the production of primary products, the burden of any tariff-induced exodus of labour from the primary sector to the manufacturing sector will tend to fall more on owners of natural resources than on owners of capital. In fact, if capital and labour are sufficiently close substitutes and if land and labour are sufficiently weak substitutes, any exodus of labour will actually raise the marginal productivity of capital in the primary sector. Thus, the Canadian tariff may serve to stimulate rather than to deter FDI inflows to the unprotected primary sector as well as to the protected manufacturing sector.

If trade and FDI are substitutes rather than complements, one is tempted to conclude that a reduction in trade barriers on manufactured

goods between the United States and Canada will cause widespread disinvestment and plant closures by U.S. multinational enterprises (MNEs) currently operating in Canada and by Canadian MNEs currently operating in the United States. This may occur if each retreats to centralize production in the parent facility and to serve the foreign market through expanded exports. However, this prospect seems unlikely for two key reasons. First, there are economies of scale attributable to longer production runs within the typical plant operating in Canada, and second, a growing proportion of intra-firm trade by U.S. MNEs is not in standardized products, where the branch plant merely replicates what is done at head office, but rather in non-homogeneous products, where local design and processing occur before sales and where reputation is important. Neither of these features is captured by the standard general equilibrium trade model adapted to accommodate FDI flows. Finally, even if there were some net disinvestment by U.S. MNEs currently operating in Canada, this is likely to be a good thing rather than a bad thing for Canada because it reflects a cost-minimizing and therefore a resource-saving response, and in any event, it is likely to be more than offset by an increase in FDI capital into Canada from third countries.

A *unilateral* tariff cut by Canada may well cause some exodus of FDI from Canada because it increases the attractiveness of exports over branch plant production as a means of supplying the Canadian market with a standardized product. Complete plant closures are more likely to occur in response to a sizable unilateral tariff cut if there are significant scale economies within the plant associated with the length of the production run. But a *bilateral* tariff cut also gives the Canadian subsidiary easier access to the U.S. market, and provided there are significant economies of scale available within the plant, the subsidiary may well specialize in a single product line that is particularly popular in Canada and export the additional output to the United States. Canadian demand for product variety would then be met by additional imports of other product lines from the various MNE affiliates located in the United States.

The key factors that determine whether a mutual reduction in trade barriers will cause the MNE to close down in Canada or to rationalize are the costs of transporting goods between the two markets, the size of the Canadian market relative to minimum efficient scale, the extent to which unit costs decline with the scale of output, and relative production costs in the two countries at comparable levels of output. If production costs are roughly similar in the two countries at comparable output levels, then the issue boils down to one of minimizing transport costs. Transport costs would be minimized by maintaining a branch plant in Canada, provided that the Canadian market were large enough and concentrated

enough to absorb the major portion of the plant's minimum efficient scale of output.

Suppose on the other hand that the Canadian market were too small or too diffuse for a U.S.-based MNE to maintain its subsidiary economically in Canada and rationalize production to serve both Canadian and U.S. markets. It would then be cheaper for Canada to import all product lines from plants located in the United States. This may happen for certain firms in certain industries, but it seems unlikely that it would be a widespread phenomenon because of its general equilibrium consequences. Most of the resources released from the manufacturing sector would be unable to find profitable employment in the resource sector, either because of policy-induced constraints on Canadian exports of non-renewable resources or because of the relatively high capital-labour ratio in the resource sector and constraints imposed by the finite natural resource base itself. This would seem to imply that Canadian real wages would have to fall significantly in order to maintain employment opportunities in the manufacturing sector. A reduction in the number of firms and plants operating in the Canadian manufacturing sector should, however, expand the market for those firms that choose instead to rationalize their production facilities and remain in operation. Ignoring transitional adjustment effects, real wages in manufacturing would probably rise rather than fall, as would real rates of return to capital as capital-output ratios decline. The higher real wages and real incomes that accompany the rationalization of the Canadian manufacturing sector should broaden and deepen the Canadian market and make it more attractive to further FDI from abroad. In short, I believe that the Canadian manufacturing sector would survive trade liberalization although it would undoubtedly be more specialized and perhaps even leaner than it currently is. In fact, it is quite conceivable that the higher real wages and rates of return to capital in a rationalized manufacturing sector would draw labour and capital from the resource sector, so that total employment opportunities would increase rather than fall.

The subsidiaries of U.S.-based MNEs operating in Canada would be at least as likely as Canadian-owned firms to survive the rationalization process, since they could tap the marketing expertise of the parent to facilitate their access into the U.S. market as well as the financial resources of the parent to ease the adjustment costs. Widespread closures of U.S. subsidiaries in Canada therefore seems highly unlikely, although some MNEs would undoubtedly find this option more attractive. Instead, the expanded volume of trade between Canada and the United States, together with the higher Canadian real incomes that would accompany freer trade, would make the Canadian market more attractive for FDI from the United States as well as from elsewhere — Japan and the European Community in particular. Third countries would

view a Canadian location more favourably because it would offer unrestricted access to the large North American market. The nature of the FDI that takes place under a regime of free trade is also likely to be of greater net economic benefit to Canada. Thus, instead of the typical subsidiary of a U.S. MNE being a miniature, branch-plant replica of the parent, it will tend either to specialize in a particular product line to serve both Canadian and U.S. markets, or to design, process, and package intermediate goods for distinctly Canadian market conditions.

I have said virtually nothing about the likely impact of bilateral trade liberalization on Canadian direct investment flows into the United States. To the extent that such investment has been caused by the U.S. tariff, there may tend to be some Canadian disinvestment in the United States for reasons already explained. But it seems much more likely that Canadian direct investment abroad will also tend to be stimulated rather than deterred by U.S.-Canadian trade liberalization. Canadian direct investment in the United States has grown dramatically in recent years despite the fact that U.S. tariff barriers have fallen. As well, Canadian direct investment abroad does not typically involve the production of standardized products but rather the design and processing of Canadian-made components and raw materials into finished and semi-finished products suitable for local market conditions. If Canadian access to U.S. markets is improved, there will be more of this trade and more complementary Canadian direct investment abroad.

My tentative conclusion is that trade liberalization between the United States and Canada is more likely to increase than to decrease FDI flows in both directions between the two countries, with no presumption that the net flow will be biased in one direction or the other. However, additional FDI flows into Canada from third countries may well tilt the balance toward Canada being a greater net importer of FDI capital than it currently is. But these conclusions are at best first approximations. There is, after all, an overriding balance-of-payments constraint which dictates that any net increase in FDI capital inflows must mean either a corresponding decrease in net portfolio capital inflows with the current account balance unchanged or a corresponding increase in the current account deficit (or a reduction in the current account surplus) with net portfolio capital inflows unchanged. U.S.-Canadian trade liberalization in manufactures will raise Canadian real incomes and the volume of internally generated savings in the long run, and since the capital requirements for an efficient manufacturing sector are likely to be modest (because rationalization would mean that capital-output ratios would typically fall), there is a strong presumption that trade liberalization would enable Canadians to own more of their own resources and to rely to a lesser extent on foreign funding than has historically been the case. A reduction in net portfolio capital inflows would therefore be quite

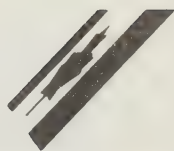
consistent with expanded two-way trade in commodities and expanded two-way flows of FDI capital.

I would like to make two final observations. First, whatever we judge to be the effect of trade liberalization on foreign direct investment flows, it seems that there is a strong presumption that the FDI that Canada is likely to get under a system of free trade would bring more benefits and less costs than the FDI that it has managed to attract into its highly protected market. Second, are Canadians interested in the relationship between trade liberalization and FDI flows because they are concerned about the level of foreign ownership and control of the Canadian economy and want to know in advance whether trade liberalization will require that foreign investment restrictions be strengthened or weakened? Or are they concerned about an accelerated exodus of domestic savings to finance capital formation abroad rather than at home, or because they know that FDI typically involves a net transfer of capital and therefore has balance-of-payments consequences? To reiterate a point made earlier, Canada should not compromise the achievement of trade liberalization for any of these reasons or because of any other conceivable indirect effect that trade liberalization might have.

Notes

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1. It will become apparent that a major reason why the United States would be interested in such a proposal, in view of the fact that it already has a large enough internal market to achieve scale economies, is that subsidiaries of U.S. firms in Canada are likely to benefit from the arrangement.
2. Assuming that licensing the technology to a firm located in the foreign market is ruled out because of difficulties in extracting the full economic rent from the intangible asset.
3. David F. Burgess, "Protection, Real Wages, Real Interest and Foreign Ownership," *Canadian Journal of Economics*, Vol. 13, No. 4, November 1980. pp. 594-614.



U.S. Trade Policies and Canadian Interests

Summary of the Proceedings of a Research Symposium

COLLEEN HAMILTON AND
JOHN WHALLEY

Canada's most important export markets lie in the United States. The proportion of our exports which goes to the United States has been increasing steadily over the postwar years and is now about 75 percent. A sense of where U.S. trade policies are headed is therefore central to the design of Canada's trade policies.

Of late, there has been increasing concern about the fragmentation of the global trading system, through both the spread and growth of managed trade and the widespread use of non-tariff measures. These trends pose a perplexing problem for Canadian policy makers because they may trigger retaliatory action by the United States against third parties which could adversely affect us. Growing protectionism in the United States, even if not directed at Canada, can damage our ability to penetrate U.S. markets and threaten the living standards of Canadians.

Issues arising with possible future directions for U.S. trade policies were addressed by participants in a Royal Commission research symposium organized by the Research Advisory Group on Trade Policy (Economics), held on July 24, 1984. Two main themes were explored: the evolution of U.S. trade policies — in particular, whether or not there is evidence of an increasing protectionist trend in the United States; and the implications for Canada of possible adoption of aggressive reciprocity proposals by the United States in the trade policy field. In addition, the symposium examined the sectoral free trade initiative currently under discussion between the United States and Canada and the implications of this for wider Canadian trade policy objectives.

The symposium participants, listed at the end of this paper, were scholars and government officials with expertise in trade issues. Several papers and oral presentations explored key issues and provided the focal point for further discussion.

In the first symposium session, dealing with U.S. trade policy, Raymond Ahearn and Alfred Reifman, of the Congressional Research Service in Washington, presented a paper assessing protectionist trends in current U.S. trade policies and outlined possible future directions. The implications of the U.S. reciprocity proposals for Canada were discussed by Ronald Wonnacott of the University of Western Ontario.

In the session on the sectoral free trade initiative, Harvey Bale of the Office of the U.S. Trade Representative presented a paper describing American perspectives on the issue, and Anthony Halliday of the Department of External Affairs, Ottawa, gave the Canadian view. A quantitative assessment of the potential gains to Canada from sectoral free trade was provided in a paper by David Cox and Richard Harris. Gary Hufbauer of the Institute for International Economics in Washington presented a paper on the political feasibility of a sectoral or even broader bilateral free trade arrangement between Canada and the United States.

This paper summarizes the main points from the presentations to the symposium and the discussion that followed. The paper by Ahearn and Reifman has been revised and is included in this volume. The results of the Cox and Harris paper are briefly summarized in an appendix to a paper by Harris in this volume. Gary Hufbauer's paper appears in *The Politics of Canada's Economic Relationship with the United States*, Volume 29 of the Commission's research series.

U.S. Trade Policy

In their symposium paper, Raymond Ahearn and Alfred Reifman looked at the future of U.S. trade policy from both pessimistic and optimistic viewpoints. On the pessimistic side, they saw U.S. trade policies becoming increasingly protectionist and focussed on the promotion of narrow commercial interests. On the other hand, there are still supporters of a liberal foreign trade regime in the United States and things are certainly not as protectionist as they could be. The authors considered many of the protectionist messages currently emanating from the United States to be signals to trading partners that their markets will have to be made more open to U.S. exports or the United States will take retaliatory action.

Ahearn and Reifman explained how in the 1970s U.S. trade policies began to shift away from the liberal pattern that had prevailed since the end of the Second World War. Not only did organized labour, U.S. multinationals and American agriculture question the desirability of a liberal trade regime, but Congress also began to place limits on executive authority over trade.

Despite this erosion in commitment to unrestricted trade, Ahearn and Reifman cited evidence to show that there is still support for a liberal

trading order. They saw no desire to return to Smoot-Hawley tariff levels of the 1930s or to adopt the 1971 Burke-Hartke across-the-board protectionist actions. Support for local content proposals (such as in autos) is much weaker than the votes in the House suggest. The voluntary restraints that have been implemented on steel and autos have been adopted in part to avoid recourse to more drastic measures. Furthermore, in their opinion, both the president and Congress have been able to withstand steady pressures for protection from firms, unions and legislators in the last few years.

The authors attributed increased pressures for protection in the United States mainly to the slower growth and higher unemployment of the recent recession. This has coincided with a relative decline in American economic and political power. The corresponding increase in the economic power of Japan and the newly industrializing countries has also played a role, especially since these countries do not view the world trading system in the same way as the United States has in the past. Deficiencies in GATT rules covering services and foreign direct investment have also contributed to the increased pressures for protection in the United States.

As Ahearn and Reifman also pointed out, it does not help that the “losers” from increased trade interdependence and competition are usually more regionally and industrially concentrated and have a louder voice than the “winners.” Furthermore, economic conditions are less favourable to liberal trade than in former years. Growth has slowed, wage rates are less flexible, labour markets are not in equilibrium at full employment, and exchange rates do not fully reflect the relative competitive positions of different countries. However, the authors refuted suggestions that the United States is slipping in world trade, that its economy is becoming de-industrialized, and that many foreign trade practices in the United States are unfair. Studies were cited suggesting that all these perceptions are unjustified.

Ahearn and Reifman also addressed the issue of how to prevent further erosion of the liberal U.S. trade policies of former years. In their view, it is necessary to have a sustained and more balanced economic recovery both in the United States and elsewhere, in conjunction with sound adjustment programs. At the time the symposium was held the impacts of the 1984 U.S. elections were unclear, but the authors thought that Congress would probably continue pushing U.S. policy in a more active and interventionist direction and generally be more willing to see the United States pursue unilateral actions. However, they noted that the postwar “cry and sigh” syndrome in trade policy still continues in 1984. The “cry” is that Congress is about to enact protectionist legislation; the “sigh” of relief follows when the protectionist actions turn out to be not that restrictive.

In the authors' views, while negotiations to open markets to U.S. exports, strengthen GATT rules and improve other countries' GATT obligations would clearly be beneficial to the United States, the United States has very little to put on the bargaining table that would be of interest to other countries and also politically acceptable domestically. However, Ahearn and Reifman saw a strong presidential commitment to facilitating adjustment and improving international cooperation as crucial to regaining the momentum toward a liberal trade policy in the future.

In remarks presented to the symposium on the implications for Canada of possible future directions in U.S. trade policies, Ronald Wonnacott focussed on U.S. reciprocity proposals and their implications for the welfare both of the United States and its main trading partner, Canada.

As Wonnacott emphasized, the concept of reciprocity includes a wide spectrum of possible trade measures, both liberalizing and protectionist. Liberalizing measures would include reducing U.S. tariffs and other trade barriers reciprocally with its trade partners, or passively refusing to grant concessions unless others did as well. More protectionist measures would include increases in U.S. trade barriers to parallel increases in foreign barriers. Wonnacott saw recent watered-down reciprocity proposals in the United States as falling into this category. At the protectionist extreme, the United States could impose barriers against countries if it feels that their existing barriers are larger than U.S. barriers.

Wonnacott noted that while Canada is willing to surrender a degree of autonomy to an institution like the GATT, it would be very difficult for Canada to accept a unilateral judgment by the United States on what is protectionist in our trade policies relative to theirs. While pointing out that Japan has been the main target of U.S. reciprocity proposals, Wonnacott warned that since Canada's tariffs are open and higher than U.S. tariffs, in contrast to Japan's more hidden trade barriers, it might be easier for Canada eventually to become a more significant target for such measures.

Wonnacott also traced the possible steps of a reciprocity-inspired trade war between the United States and Japan and the possible impacts on Canada as a third party. These results are reported in a recent study by Wonnacott for the Institute for Research on Public Policy, summarized in *Canadian Trade Policies and the World Economy*, Volume 9 of the Commission's research series.

Wonnacott stressed that any large-scale trade war would be detrimental to the economic welfare of all involved. However, it is conceivable that if Canada is not the target country, it could benefit from the trade diversion that would result from a U.S.-Japan trade war.

Finally, Wonnacott outlined the ways a strictly protectionist reciprocity policy could be modified to be trade liberalizing in its effects. It would need to be applied on a non-discriminatory basis and limited to new forms of protection rather than based on a judgment on the effects of existing barriers. In addition, it would have to be restricted to products not of a class or kind produced in the United States; video-cassette recorders would be an example.

The discussion which followed centred on possible U.S. reactions to the sectoral free trade initiative proposed by the Department of External Affairs, and the possible U.S. response to a proposal for a broader free trade arrangement. In addition, questions were raised as to the likelihood that the U.S. administration would be granted negotiating authority to cut tariffs in any possible bilateral negotiation with Canada, and what the price of such authority would be.

The American participants at the symposium agreed that it was highly unlikely that any trade measures would be passed by Congress in the remainder of the 1984 session. Michael Aho speculated that a full bilateral free trade initiative would not be successful in Congress unless it was part of a larger trade package. He attributed this to lobbying by special interest groups and even third countries adversely affected by such an arrangement. It was agreed that a price would have to be paid for bilateral tariff-cutting negotiating authority, perhaps in the form of changes in contingent protection measures between the two countries.

Commenting on the proposals for the use of reciprocal trade measures by the United States to open markets abroad, Reifman noted that even though these may seem like sensible policies to politicians, they have not received widespread support in Congress. Both he and Ahearn agreed that, thanks in good part to inertia in the U.S. system, a return to protectionism similar to that in the Smoot-Hawley or Burke-Hartke Acts was unlikely.

Responding to a query on his comment that Canada would benefit from a U.S.-Japan trade war, Wonnacott stressed that without a doubt everyone would be hurt by such a trade war but Canada could also benefit from the resulting trade diversion. Moreover, he emphasized that his discussion of reciprocity was based not on the weaker current version but on the stronger 1983 proposals.

The Sectoral Free Trade Initiative

In a session on sectoral free trade between the United States and Canada, Harvey E. Bale Jr. from the Office of the U.S. Trade Representative in Washington presented an overview of the Canadian-U.S. Sectoral Initiative from the U.S. side.

Bale briefly recounted how the Canadian and U.S. governments have worked cooperatively in the past toward greater multilateral liberaliza-

tion. This commitment to multilateralism, however, has not excluded using a sectoral approach when necessary. To illustrate this point, Bale remarked that while the Canadian proposal for sectoral negotiations on non-ferrous metals and forest products during the Tokyo Round was not formally adopted, efforts were made to accommodate bilateral interests on this issue. Furthermore, there were other sectors where the tariff-cutting formula could not be applied and had to be negotiated individually with various U.S. trading partners. Bale reported that the United States welcomed the Canadian government's current bilateral initiative, but stressed that bilateral sectoral negotiations are considered by both governments as a supplement to multilateral liberalization efforts.

He reported that as a follow-up to the Canadian initiative, joint Canadian-U.S. working groups are currently considering four areas: (a) steel; (b) agricultural equipment and inputs; (c) traded computer services and other elements in the informatics sector; and (d) government procurement, especially of urban mass transit equipment.

According to Bale, the Canadian government has also identified petrochemicals, textiles and clothing, and red meat as sectors for future discussion. The Americans have expressed an interest in including forest products, cosmetics, furniture and alcoholic beverages.

While acknowledging the merits of a working bilateral relationship between the two countries, Bale acknowledged the importance of obligations to the GATT on both issues. It was pointed out that any future agreements would have to conform to the GATT either under the free trade area provision or under a GATT waiver. Finally, Bale noted that many issues remain to be resolved but expressed the hope that positive results will be forthcoming over the next year.

In remarks made to the symposium following Bale's presentation, Anthony Halliday of the Department of External Affairs, Ottawa, gave his views on where Canada currently stands on sectoral free trade and where current discussions are headed. He noted that there is a commitment to the initiative on behalf of the government and a joint work program is currently underway with the United States.

He explained that the selection of sectors was not based on any economy-wide analysis, but on more immediate trade problems and expressions of interest from the private sector. Tariff barriers and non-contingent non-tariff barriers (quantitative restrictions and government procurement) have been identified as areas of interest. Safeguards,¹ subsidies and countervail,² while of interest, are recognized as difficult to negotiate and could not form part of a sectoral free trade arrangement.

Halliday stressed the problems that would be encountered in any sectoral negotiations on the basis of mutual advantage. To proceed on the basis of cross-sectoral trade-offs would entail "winners" and "losers," which he saw as a politically hazardous course.

While confirming that the issue of GATT compatibility has been deferred, Halliday noted the options were either a declaration under Article XXIV or a waiver. He also saw a need to address the issue of how multinationals will respond, to prevent an exodus of capital south of the border. The Auto Pact cannot be used as a prototype since the United States is unwilling to consider production guarantees of the form included in the Auto Pact.

Commenting on the American agenda, Halliday suggested that the United States would be likely to establish objectives with respect to energy prices and investment issues. As for how the sectoral initiatives will be judged in the future, depending on which direction the world is moving, they may turn out to be a momentary aberration from multilateralism or the first timid steps away from it.

David Cox and Richard Harris presented a paper on "A Quantitative Assessment of the Economic Impact on Canada of Sectoral Free Trade with the United States." They provided estimates of the potential impacts on Canada of a sectoral free trade arrangement with the United States. They also compared their results with those of bilateral free trade. Their analysis is based on a quantitative general equilibrium model which includes a separate treatment of industrial structure and firm behaviour in Canadian manufacturing industries. This model is summarized in a paper by Harris in this volume, along with an appendix giving the main results on bilateral and sectoral free trade.

In their analysis, Cox and Harris defined Canada-U.S. sectoral free trade (SFT) as a bilateral removal of trade barriers between Canada and the United States in five industrial sectors: textiles, steel, agricultural machinery, urban transportation equipment, and chemicals. This list does not correspond exactly to the list of sectors currently under negotiation, due to differences between the products proposed and the industrial classification in their model. The authors stressed that their intention was to provide approximate estimates not only of the benefits of SFT to Canada, but also of the broader economic implications and resulting sectoral reallocations. In a brief explanation of the merits and drawbacks of sectoral free trade, they noted that an increase in the volume of two-way trade should produce benefits in the form of increased specialization and economies of scale.

Cox and Harris provided a brief description of the model and data used in their analysis. They pointed out that the main difficulty in compiling their data was getting reliable estimates of rates of export subsidies and non-tariff barriers (NTBs). While they managed to get some estimates of export subsidies in Canada and the United States, they were not so fortunate with NTB estimates. Consequently, they emphasized that some caution must be used when interpreting the results. They also drew attention to the small size of the sectors studied relative to the total

economy. Altogether, the five sectors included account for less than five percent of aggregate value-added in their base period data.

Detailed tables provided by the authors showed the results of their analysis. Cox and Harris first compared simulation results of their impacts of sectoral free trade to complete bilateral free trade (BFT). The authors considered BFT as a 100 percent bilateral reduction in all tariff and non-tariff barriers involving the United States and Canada, including export subsidies but not extended to third countries. Thus, trade barriers against all other countries remain at their initial levels.

Their main results suggest the following impacts for Canada.

<i>Sectoral Free Trade</i>	<i>Bilateral Free Trade</i>
— rise in real wages of about 5%	— welfare gains in the area of 9.2%
— 2% shift in labour between sectors	— 7% shift in labour between sectors
— elimination of 14.4% of firms in the 5 sectors in long run equilibrium	— elimination of 53% of firms in the 5 sectors in long run equilibrium

With the exception of agricultural equipment, both bilateral and sectoral free trade lead to improvements in output, productivity and employment in targetted sectors. Bilateral free trade, however, implies a more highly specialized industrial sector. In particular, the transportation equipment and paper and allied products sectors do well under BFT. Neither of these sectors benefits to any significant degree under SFT.

To determine the reliability of their estimates of the impact of changing trade barriers either sectorally or more broadly, Cox and Harris attempted to discover what impact only a small reduction in trade barriers would have. They find that if trade barriers are only one-half of their assumed levels, the corresponding effects on wages, output, welfare etc., would be about one-half of those reported.

Cox and Harris also discussed the interrelationships between sectoral free trade and export subsidies. After discussing the effects one would in theory expect export subsidies to have in a small country — large country situation, the authors discussed some results from simulations using their model in which they alter export subsidy levels. They concluded that the higher subsidy levels are before trade is liberalized, the smaller are the benefits to Canada from sectoral free trade. In addition the higher U.S. export subsidies are initially, the smaller the rationalization effects in sectoral free trade. The authors cautioned, however, that the Canadian subsidy rates they used may be too low and the results could change if these were increased.

In concluding, Cox and Harris reiterated that “target” sectors benefit more under a specific sectoral free trade arrangement than under a

general bilateral free trade arrangement. They emphasized the importance of U.S. export subsidies in assessing the overall impact of sectoral free trade. Their results tended to suggest that the higher export subsidies are in the United States, the smaller the overall benefits to Canada from sectoral free trade. They stressed the need for caution in interpreting these results, especially in view of the weakness of NTB estimates and the elasticity values they used. Their preliminary work suggests, however, that the current sectoral free trade initiative would be beneficial to Canada.

In a final paper presented to the symposium, Gary C. Hufbauer, from the Institute for International Economics, Washington, presented a paper prepared for the Commission's research section on Institutions, and discussed the feasibility of a bilateral trade agreement between Canada and the United States, sectoral or otherwise.

In a brief historical review of relations between the two countries, Hufbauer described the "roller-coaster" nature of Canada-U.S. economic relations since World War II. While the multilateralism of the GATT has been the dominant policy on both sides of the border, bilateral cooperation through the Auto Pact and the Defence Production Sharing Agreement has also been important, although it has more often been the result of bilateral crises than planned developments in the relationship.

Hufbauer characterized Canadian policies toward bilateral agreements as sharply inconsistent during the last two decades, while U.S. bilateral initiatives have generally been pursued for the purposes of protection rather than generating trade liberalization.

However, with the failure of the 1982 GATT ministerial meeting to move trade liberalization forward on a multilateral basis, the United States has taken a number of initiatives outside the traditional multilateral framework. Those highlighted by Hufbauer include the Caribbean Basin Initiative, negotiations with Japan on semi-conductors, a possible free trade area with Israel, and sectoral discussions with Canada.

The progress and receptivity of the Canada-U.S. sectoral discussions were then reviewed at some length. Part of this review was based on the results of a questionnaire sent to trade associations and discussions with interested parties. Hufbauer examined the sectors initially targetted for possible sectoral free trade, namely surface transportation equipment, informatics, agricultural equipment and steel. According to Hufbauer, letters and advice offered to the U.S. Special Trade Representative's Office have urged negotiations in agricultural equipment, informatics, and fabricated structural steel, as well as exploratory discussions in specialty steel, and have opposed negotiations in carbon steel and urban mass transit equipment. Hufbauer then summarized prospects in 13 sectors:

- *Cosmetics*. The U.S. cosmetic industry seems to favour bilateral tariff reductions, while Canadian reaction to possible liberalization is unknown at this stage.
- *Government procurement and urban mass transit equipment*. The Canadian industry would like a preferential agreement not open to third-country suppliers. Since Canada has no comparable markets to offer, a balanced negotiation in this sector seems out of reach.
- *Petrochemicals*. Complicating factors have included the role of the Foreign Investment Review Agency and the National Energy Program.
- *Alcohol*. The basic U.S. complaint here is that the provincial liquor boards maintain discriminatory practices. However, the United States has little to offer the Canadian alcoholic beverage industry.
- *Furniture*. Wide tariff discrepancies exist between Canada and the United States, making negotiations difficult. It would also be difficult to negotiate a balanced package including home furniture, due to the nature of the Canadian industry.
- *Meat*. Lamb and beef are the only areas where liberalization could occur.
- *Aerospace and electronic products*. This is not seen as a promising sector for liberalization.
- *Informatics*. The U.S. Administration views this sector as particularly important, since negotiations could set a precedent for the broader area of services trade.
- *Paper and paper products*. The U.S. paper industry strongly supports liberalization, but the Canadian industry sees little to gain.
- *Wood and wood products*. Prospects seem good for elimination of duties on hardwood plywood under a sectoral arrangement. However, discrepancies between Canadian and American standards on softwood plywood grades make negotiations difficult.
- *Textiles*. There is not much prospect for liberalization here, as producers in both countries seem to prefer protection.
- *Steel*. Mixed prospects are seen here. U.S. carbon steel producers are opposed to liberalization while the U.S. specialty steel industry is more favourable to a bilateral arrangement.
- *Agricultural equipment*. A balanced sectoral negotiation here looks promising.

Hufbauer stressed that while U.S. industry generally favours liberalization of trade with Canada and is anxious to proceed, there is the underlying sentiment that Canada has more to gain from an agreement than the United States, except in agricultural equipment and informatics. Hufbauer also stressed that unless a more balanced agreement could be devised, negotiations would not generate widespread support in the United States. Other detracting features of sectoral negotiations

include their relatively small scale and the loud opposition from losing sectors.

Hufbauer offered his suggestions for alternative approaches to sectoral negotiations. One possibility would be a bilateral across-the-board cut in tariffs over ten years. In his view, this would ultimately result in more trade liberalization. A second approach of potential interest to Canada would be to limit contingent protection. This could involve exempting Canada from the injury test³ in safeguards or countervailing duty measures, or excluding Canadian exports from escape clause relief. A modest escape clause agreement was signed between Canada and the United States in February 1984. A third approach would be to relax government procurement policies, a move Hufbauer acknowledged as next to impossible, given the powerful interests involved.

In concluding, Hufbauer discussed the role of the U.S. Congress, the United States administration and other trading partners in trade liberalization. He emphasized that the United States is strongly interested in multilateral liberalization but if those efforts fail, bilateral negotiations are a viable alternative.

Most of the discussion following the presentations focussed on the merits of sectoral compared to full bilateral free trade and the implications for multilateralism in both Canada and the United States.

Cox and Harris were asked how much of the gain reported in their quantitative analysis of sectoral free trade was due to their large reported gain in textiles, and whether they had calculated the gains excluding textiles. While suspecting that this was the case, Cox and Harris had not as yet done such a calculation. Harris also noted that in his view a move to sectoral free trade could compromise a larger trade package with the United States than the one currently being discussed. Furthermore, the double adjustment problem, in which Canadian industry first would have to adjust to bilateral free trade and then move to multilateral free trade, has to be considered.

Harvey Bale gave his views on how the sectoral initiative fitted with broader objectives of American trade policy. Bale observed that this was the first time the United States has had to react to a liberalizing trade initiative from abroad. Problems to be considered on the American side include balanced reciprocity and the involvement of the provinces and states. As for barriers, there is the issue of defining non-tariff barriers and deciding whether they extend to investment.

A participant asked why the United States should be interested in such an initiative, in view of the problems and the traditional U.S. position. Bale responded that the United States currently feels it should not be constrained by the multilateral doctrine if possibilities for liberalization occur. The United States is not giving up multilateralism and is still pushing hard for a new round. However, the bilateral sectoral approach can be a method to stimulate the multilateral process, and

those outside will have to evaluate consequences. In addition, it is useful to offset protectionist tendencies in Congress and in private sectors through bilateral arrangements.

The question as to whether there would be major advantages or disadvantages if the Canadian government subsequently wanted to broaden the discussions was also raised. Bale and Halliday agreed that negotiation of full free trade would be more likely to be compatible with the GATT and that it might be easier to make concrete progress on a broader basis than in a few selected sectors. However, from the Canadian standpoint it would be difficult politically because of the sovereignty implications.

Another symposium member stressed that Canada and the United States are still at the preliminary stage of considering whether to enter into sectoral negotiations. Furthermore, a move from sectoral to full free trade produces a whole different set of policy implications. First, it would be necessary to examine whether the Canada-United States relationship could be better managed bilaterally or multilaterally. Second, it would be necessary to examine the subsequent effects on Canada's relationships with other countries and our ability to negotiate with them.

The implications of moving away from multilateralism were the focal point of much discussion. One participant strongly disagreed with the implied statement that sectoral negotiations are an extension of the multilateral negotiation process. In his view, they are a major exception to Article I of the GATT. Furthermore, he questioned whether it was in the U.S. interest to pursue bilateralism when it is more often linked to protectionism than to liberalism. The earlier statement was clarified as meaning that the sectoral approach is supplementary to the multilateral approach, a view supported by participants on both sides of the argument. From the Canadian standpoint, it was stressed that the multilateral option is being kept fully open so that Canada can negotiate in Geneva credibly and in good faith.

A participant noted that the multilateral system has become increasingly difficult to manage because only a limited number of countries adhere closely to its rules and are also willing to build on those rules and move towards freer trade. If the present degree of commitment is small and weak, some form of bilateral initiative could be useful in the process of strengthening the multilateral system.

Another participant drew attention to the role multinationals could play in either bilateral or multilateral trade negotiations. In his view, multinationals are ahead of the trade negotiations since they have accomplished much rationalization and specialization between U.S. parent companies and Canadian subsidiaries over the past five years. Therefore there could be a lot of value in discussing trade issues with the multinationals on both sides of the border.

Halliday was asked whether there had been any discussions with the provinces on sectoral free trade and what their reactions were. Halliday reported there had been extensive consultations. There has been strong support from the Western provinces. Quebec is more in favour of full free trade but agrees that sectoral free trade is a step in the right direction. The Maritimes as yet are neutral and have not identified the sectors they are interested in pursuing. Alberta, on the other hand, has identified meat and petrochemicals as important. To date, Ontario has remained neutral but has stressed the need for thorough background work and appears unwilling to sacrifice one Ontario industry for gains by another. Halliday emphasized that these varied reactions underline the need to avoid a cross-sectional trade-off position because of the regional implications.

The proposal for sectoral free trade with the United States initiated by the Canadian government in 1983 has generated much discussion during the symposium. Time and again it was emphasized that there is a strong commitment to multilateral liberalization in both Canada and the United States. However, there was a strong perception that this does not have to exclude a bilateral agreement that is mutually beneficial. Bilateralism and multilateralism can be pursued as dual approaches, although there are clearly problems. The work by Cox and Harris suggests that Canada would definitely benefit from such an arrangement, although our gains from a wider free trade arrangement would be larger. What the future holds for sectoral or broader bilateral free trade or U.S. trade policies in general remains to be determined.

Notes

1. Under Article XIX of the GATT, safeguard or emergency action in the form of tariffs or quantitative restrictions may be taken by a country against imports that cause or threaten serious injury to domestic producers. It is not necessary to prove that the imports in question are being dumped or are subsidized.
2. Under Article VI of the GATT, a tariff called a countervailing duty may be levied against imports which have been subsidized by another country or are being dumped (i.e., sold for less than the comparable price for the product in the exporting country). The duty cannot exceed the margin of dumping or the amount of the subsidy. The imports in question must also be causing or threatening material injury to a domestic industry.
3. In the United States, the International Trade Commission investigates the nature of the injury to domestic industries from imports if complaints are made about those imports. "Material injury" must be demonstrated in cases where anti-dumping or countervailing duties would apply and "serious injury" must be shown in cases where safeguard measures are contemplated.

Appendix

List of Participants

RESEARCH SYMPOSIUM ON CANADA AND THE FUTURE OF THE GLOBAL TRADING SYSTEM HELD BY THE ROYAL COMMISSION ON THE ECONOMIC UNION AND DEVELOPMENT PROSPECTS FOR CANADA

Ottawa, July 24, 1984

Raymond Ahearn	Congressional Research Service, Washington
Michael Aho	Office of Senator William Bradley, Washington
Harvey Bale	Office of the United States Trade Representative, Washington
Margaret Biggs	North-South Institute, Ottawa
Peter Cornell	Economic Council of Canada, Ottawa
David Cox	University of Western Ontario, London
John Curtis	Institute for Research on Public Policy, Ottawa
William Diebold, Jr.	Council on Foreign Relations, New York
Anthony Halliday	Department of External Affairs, Ottawa
Richard Harris	Queen's University, Kingston
Michael Hart	Department of Transport, Ottawa
Gerald Helleiner	University of Toronto, Toronto
Gary Hufbauer	Institute for International Economics, Washington
Andrew Klymchuk	Department of Regional Industrial Expansion, Ottawa
Stephen Langdon	International Development Research Centre, Ottawa
Roy Matthews	Economic Council of Canada, Ottawa
David Paterson	Department of Regional Industrial Expansion, Ottawa
John Quinn	York University, Toronto
Alfred Reifman	Congressional Research Service, Washington
Ronald Shearer	University of British Columbia, Vancouver
David C. Smith	Queen's University, Kingston, and the Royal Commission
William R. Spence	Department of External Affairs, Ottawa
Denis Stairs	Dalhousie University, Halifax
John Weekes	Department of External Affairs, Ottawa
John Whalley	University of Western Ontario, London, and the Royal Commission
Gilbert Winham	Dalhousie University, Halifax, and the Royal Commission
Ronald Wonnacott	University of Western Ontario, London

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The Future of U.S. Trade Policy

RAYMOND J. AHEARN AND
ALFRED REIFMAN

The Reciprocal Trade Act of 1934 propelled America and the world away from protectionism and toward today's open world economy. Fifty years later, U.S. trade policy since then can be seen to have contributed importantly to the remarkable pace of world economic growth and the widespread distribution of the fruits of this growth. Looking forward though, there may be cause for serious concern.

In various ways, U.S. trade policies and practices are increasingly concerned with promotion of narrow commercial interests, as many of its trading partners have been for years. Many actions of the U.S. Congress and the administration are signals to foreign governments and constituents that their markets have to be open or the United States will reluctantly take retaliatory action. A number of industries feeling the pinch of world competition — from textiles and apparel to motorcycles, steel, automobiles, copper, and sugar — have gone to Washington asking for protection, and they are meeting with considerable success.

What happens if support for liberal trade continues to erode? Less discretionary forms of administrative protection and more expansive definitions of unfair trade practices will be legislated. Actions protecting individual industries will escalate, preserving living standards for some Americans at the expense of others. U.S. import restrictions will necessarily lead to cuts in exports, costing the jobs of workers in the more dynamic industries. The subsequent decline of U.S. leadership in trade policy will accelerate the drift toward bilateralism and regionalization of world trade, further undermining the multilateral trading system that has contributed importantly to U.S. and world prosperity in the postwar era.

A strong liberal trade policy has been a keystone of U.S. foreign policy since the end of the Second World War. It was accompanied by a rapid expansion of U.S. and world trade. The period of rapid growth

ended in 1973 with OPEC's emergence on the world scene. But even before that, the coalition for liberal trade policies was eroding.

- Organized labour jumped ship in the early 1970s when it became clear that unemployed workers can be left behind in import-sensitive industries but that management and technology can go abroad. (Note that 1971 saw the first U.S. trade deficit in this century.)
- U.S. multinationals increasingly acquired divergent importing and exporting interests that sometimes diluted opposition to protectionism.
- American agriculture — the backbone of the liberal trade coalition — had begun to question its liberal trade stand, in light of European export subsidies and Japanese import quotas.
- In response to these trends, Congress began to reassert its constitutional role in trade policy by limiting the discretionary authority of the executive branch of government.

Ironically, despite some evidence that the United States is turning protectionist, the underlying support for liberal trade remains surprisingly strong, though somewhat battered.

- There is no desire to return to the very high tariffs of 1930 or to adopt across-the-board protectionist actions embodied in the 1971 Burke-Hartke proposal to control technology transfers and to impose widespread import quotas.
- Support for local content is weaker than the votes in the House of Representatives indicate, suggesting that Congress wants to send a signal to foreign governments (particularly Japan) as well as to its constituents at home without necessarily backing it with force.
- Even where the United States has protected industries outside the GATT rules (such as those regarding voluntary restraints on steel and autos with the European Community (EC) and Japan), it has done so to avoid more drastic measures (for example, legislated quotas in the case of autos and a drying up of trade with the EC if the dumping and subsidy investigations had been pursued).
- There has always been pressure from firms, unions, and legislators supporting protectionist proposals; more often than not these have been successfully contained by the president and Congress.

However, the pressures for protection seem greater today for a number of reasons.

- Strains have resulted from the recent recession, slower growth, and higher unemployment.
- Increased trade dependence and competition yield more losers as well as winners. Losers resist adjustment and are concentrated by industry and regions. Winners are more dispersed and therefore are not as well organized.

- There are deficiencies in GATT rules covering services and foreign direct investment.
- There has been a relative decline in American economic and political power and a corresponding increase in the economic power of Japan and the newly industrialized countries. These countries play by different rules than the United States. There is a perceived unwillingness of these countries (plus the European Community) to shoulder responsibilities commensurate with their new position.
- The conditions that foster liberal trade are increasingly absent in today's world economy. Policy makers live in a world where wages are not flexible, where full employment has not been achieved, and currencies do not reflect competitive positions.

Trade is politics and political life thrives as much on perceptions as on realities. A pervasive view is that the United States is slipping in world trade, that the U.S. economy is being de-industrialized, that many of the trade practices of foreign countries are unfair, and that the United States has the only open market in the world. Such perceptions, exacerbated by an overvalued dollar and huge trade deficits, have lowered the resistance of supporters of liberal trade policies to protectionist pleas.

A number of recent economic studies suggest that such fears are largely unjustified. William Branson¹ finds that — except for the 1982–84 dislocations induced by the strong dollar — the U.S. economy has adjusted to changing pressures from trade. Resources have been moving from contracting to expanding sectors (much as liberal trade theory postulates), with aggregate manufacturing employment actually increasing slightly from 1973 to 1980 or 1981. The expanding sectors use higher technology and have higher productivity than the contracting sectors, so the resource allocation is likely to increase productivity much as the liberal trade theory predicts. Robert Z. Lawrence² finds that the United States has not been undergoing a process of de-industrialization and that the net impact of international competition on the overall size of the U.S. manufacturing sector has been small and positive. Paul Krugman³ tentatively finds little evidence that foreign unfair trade practices are hurting the United States. Specifically, he finds no evidence to support the claim that foreign targetting leads to increased unemployment in the United States. Only in the case of autos is there evidence that foreign targetting is moving U.S. workers from good jobs (where the wage rates and marginal productivity are high) to bad jobs. Few undercut U.S. technological progress by targetting sectors that yield important externalities.

The research validates much of what we already know. Trade policy affects the composition of U.S. exports and imports but has little effect on the overall level of trade and the trade deficit. The current U.S. trade deficit of more than \$100 billion is due primarily to fiscal and monetary —

not trade — policies that have led to a strong U.S. dollar. The strong dollar in turn is largely the result of an expansionary fiscal policy which, combined with tight money, is cutting overall unemployment and producing a strong recovery. The strong dollar (and consequently the engorged trade deficit) comes from the same forces that are causing a robust economic expansion. Debunking economic myths, however, will not regenerate support for liberal trade in the United States. If U.S. trade policy and practice are to remain open and unrestricted, a sustained and more balanced economic recovery will be needed. Tighter fiscal and easier monetary policies will help produce this result.

A rising tide unfortunately does not lift all boats — some workers and communities are always going to be vulnerable and subject to economic distress exacerbated by increased trade. Adjustment programs for the trade losers help maintain public support for liberal trade.

Trade adjustment assistance (TAA) can be an appropriate approach for dealing with this problem. But TAA, which was established in 1962, is a discredited and underfunded program that has few supporters. Senator Robert Dole recently summed it up well: “I have never known a program that promised so much and gave so little as the trade adjustment assistance program.” The problem with TAA is not the concept but the implementation. TAA benefits were badly delayed. Training was rarely provided. The mandatory training requirement in the law was never used. Fewer than 1 percent of the unemployed got job search or relocation assistance. Only a minuscule amount (\$11 out of every \$1000) went for adjustment. The funds primarily were used to maintain incomes.

Can TAA be revitalized to achieve the original objectives of facilitating the adjustment of workers to new economic conditions, thereby reducing protectionist pressures? This will be very difficult because there is no political constituency supporting the program. Organized labour still considers it burial assistance, management in import-sensitive industries prefers protection, and the large multinationals and agricultural lobbies don't want to expend political capital on issues that don't directly affect them. Only if the president and Congress decide that a revitalized TAA program is necessary for reducing protectionist pressures head-on and for maintaining support for liberal trade will it be possible.

But more than sustained economic expansion at home and abroad, a lower dollar and improved adjustment assistance may be needed to stop the erosion of U.S. liberal trade policy and practice. Let us look at Congress, future multilateral trade negotiations and presidential leadership.

There is a widespread perception that Congress is more protectionist than the White House. Congressmen are accused of being preoccupied with the next election and of representing regional, local, or special interests. Only the president can represent the national interest, it is

argued. Yet, Congress has supported initiatives to liberalize trade and has successfully and consistently resisted strong protectionist pressures over the past half century.

The future, however, is unclear. The trade agenda is changing, as is the way Congress does its business. Because many contemporary trade barriers are intertwined with domestic policies and because trade is much more important, more congressional committees are considering trade legislation or conducting oversight hearings than ever before. In the last (ninety-eighth) Congress, there were 18 standing committees that exercise some jurisdiction over trade-related legislation and issues. Some 21 subcommittees — nine in the Senate, ten in the House, and two panels of the joint economic committee — claim some jurisdiction over international trade policy.

Considerable overlap and blurring of committee jurisdictions, combined with the proliferation of single-issue groups and caucuses in both the Senate and House to deal with issues such as export promotion, steel, textiles, and coal, create many forums where interested parties can focus attention on their concerns. The case of the automobile industry is illustrative. Financial aspects of the industry can be investigated by the banking committees, transportation aspects by the commerce committees, trade questions by ways and means and Senate finance committees, emissions standards by the public works committees, antitrust impacts by the judiciary committees, and trade issues affecting foreign relations by the foreign affairs committees. Almost any committee can develop an angle to have oversight hearings on international trade issues or draft trade-related bills so they will be referred to it. Given the complexity of today's public issues, jurisdictional questions become very difficult to resolve.

Wider committee involvement and the development of special-issue groups and caucuses concerning international trade have coincided with procedural reform in the House and Senate, weakening the power of committee chairmen to control the pace and content of legislation. In the House, procedures and norms offer much reduced protection of single committees from the ventures of other committees or non-committee legislators. In the Senate, junior members now show a greater degree of independence and take a more active role. The result has been an increased number of individuals and subcommittees that can have an impact in shaping the national trade debate. Instead of a few key leaders, there are many. The diffusion of trade issues among practically all committees in Congress and the greater openness of the legislative process have varied implications for trade legislation. On the one hand, legislation is much more difficult to pass. The increasing complexity of trade legislation and jurisdictional rivalries have meant more bills are referred to more than a single committee and, consequently, face a smaller probability of passage.

A second reality is that much more trade-related legislation will emerge from committees that traditionally have played a minor role in setting U.S. trade policy. The days when virtually all the trade legislation was handled in the Senate finance and House ways and means committees are probably ended. Many of the most protectionist trade bills emerged in recent Congresses from other committees with a primarily domestic orientation. For example, buy-American provisions were reported out of appropriations and public works committees, sectoral reciprocity and domestic content bills out of the House commerce committee.

Changes in how Congress does its business — particularly the diffusion of power over trade policy — are important. With more of trade policy being made by committees which do not have a long-standing commitment to postwar trade rules, ad hoc initiatives are more likely. However, the importance of these changes can easily be exaggerated. The overall direction of trade legislation is likely to be a consequence of deeper political and economic forces shaping congressional views.

In the short run, Congress can be expected to continue pushing U.S. trade policy in a more active and interventionist direction and to be more willing to have the United States take unilateral action. Congress is impatient with the slow pace of GATT procedures to deal with U.S. trade grievances. Suspicious of the efficacy of multilateral approaches, the most extreme proposals to open foreign markets to U.S. exports would have made the United States both the judge and jury of reciprocity in international trade, rather than using an outside or multilateral forum as provided by GATT.

U.S. industry's loss of market shares, jobs and profits is seldom attributed by Congress to the workings of the marketplace. Changes in the competitive position of such industries as steel, automobiles, footwear, apparel, and semiconductors are attributed predominantly to unfair foreign advantages in the form of government ownership, cartel practices, subsidies, non-tariff barriers, or other forms of market distortions. These perceptions underlie congressional efforts to create a "level playing field" for U.S. exports and form the basis for an increasing desire to protect American industry.

Barring successful international negotiations to limit or reduce unfair trade practices, strong congressional support exists for providing U.S. exporters with comparable trade ammunition to succeed in international markets, particularly in the area of official export credit subsidies. The pervasive premise that unfair foreign practices have also contributed to the problems of U.S. import-sensitive industries — apparel, specialty steel, motorcycles, and automobiles — intensifies congressional pressures for protection.

In sum, Congress has been taking the initiative in designing a more activist trade policy, challenging our closest allies to open their markets.

At the same time, a number of clearly protectionist bills have been introduced. But the central postwar tendency of a “cry and sigh” syndrome — a “cry” that Congress was going to enact protectionist legislation, followed by a “sigh” of relief when protectionist action turned out not to be restrictive — continues in 1984.

The era of large-scale multilateral trade negotiations may be over, thereby eliminating a valuable forum and rationale for domestic consensus building. As future trade negotiations focus on sectoral and bilateral issues, flexibility for negotiating reductions in heavily protected sectors will be severely constrained. The widespread perception that the GATT is either dead or irrelevant eliminates a useful tool available to policy makers to make decisions that are in the national and world interest. Proposals for institutional reform of the GATT can have only modest benefits if the major trading countries continue to settle their most important disputes bilaterally.

Negotiations to open markets to U.S. exports, to strengthen existing GATT rules and procedures, to extend GATT coverage to new areas, and to increase the obligations and responsibilities of more trading countries would slow the U.S. retreat from liberal trade policies. The problem is that the United States has little to put on the bargaining table that is politically feasible and that interests other major trading countries aside from Canada. The newly industrializing countries provide the most promising areas. They tend to have high levels of protection. The United States could make a number of concessions to these countries (reduction of protection for textiles and apparel, changes in administered protection laws) in return for a reduction of their trade barriers. This makes economic sense because such trade has the greatest potential for productivity gains, but it is hard to see political conditions where this could be done.

The EC is absorbed with its own problems. Adjustment issues are dominant. There is little support in the EC for extending the GATT to new areas or shoring up the foundation, as evidenced by the meagre results of the GATT ministerial meeting in 1982. Japan still has restrictions that can be liberalized. Moreover, they have the most to gain from the liberal trading system and the most to lose if it is eroded. However, there is no reason to believe that the Japanese are prepared to take the leadership in opening their markets to foreign competition. Thus, this avenue of rekindling support for an open world economy is not very promising. Canada's proposal for sectoral free trade with the United States remains a glimmer of hope. The United States has less to gain economically than Canada, but progress on a variety of issues could provide a badly needed momentum. Some of the agreements could perhaps be made multilaterally.

With the re-election of Ronald Reagan as president, we can assume that his philosophy of reliance on the market and reduction of govern-

ment interference in the economy will be a major force limiting protectionist actions. Nevertheless, as in the past four years, pragmatic considerations will occasionally overcome ideology.

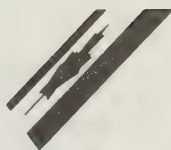
If Walter Mondale had been elected, it is unlikely that the results would be very different. His commitment to organized labour is strong but his support of specific protectionist measures such as domestic content for the automobile industry, while explicit, is also qualified. In his public statements, he usually expressed concern about protectionist measures and said that he would choose them only as a last resort. The Democratic party platform did not contain a plank on domestic content. Moreover, many of his advisers — officials who were important in the 1977–80 Carter-Mondale administration and who would have been important in a new Democratic administration — are committed to liberal trade and would oppose a return to protection.

In sum, it is uncertain if and how momentum for liberal trade will be regained. Difficult years lie ahead where countries are struggling with adjustment problems and where the old rules no longer provide a consensus for taking actions that are in both the national and world interest. As the search continues for dealing with issues of living in an interdependent world economy, presidential leadership will be at least as critical as in the past. A strong commitment by the president to promoting trade policies and programs that foster adjustment domestically and increase cooperation internationally will be necessary for avoiding a return to economic nationalism. Help from Canada will be important.

Notes

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1. William Branson, "The Changing Structure of U.S. Trade: Implications for Research and Policy" (Washington: National Bureau of Economic Research, March 9, 1984), Mimeographed.
2. Robert Z. Lawrence, "Can America Compete?" (Washington: Brookings Institution, 1984).
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Trends in U.S. Trade Policy and Non-Tariff Barriers

PETER MORICI

Throughout the postwar era, trade liberalization has been a principal U.S. international economic policy goal. To the extent permitted by domestic political constraints, which at times have been substantial, the United States has sought to lead the way by supporting successive rounds of negotiations under the General Agreement on Tariffs and Trade (GATT) and also by seeking the reduction of trade barriers through other forums.

In all the advanced industrial countries (AICs), the process of trade liberalization has not been consistent across industries. For example, ad valorem tariff rates for footwear and apparel will be at least two times greater than those for other industrial products in most AICs after the Tokyo Round cuts are completed in 1987. Further, the liberalization process has not been consistent across barriers to trade. Even as major tariff reductions were being negotiated and implemented during the 1960s and 1970s, the industrial countries were evolving a system of managed trade and protection through subsidies for many industries. The purpose of this paper is to review the status of such non-tariff barriers in the United States.

Postwar Trade Liberalization

The AICs emerged from the Second World War with a system of standing protection in the form of tariffs, quotas and other traditional non-tariff barriers to imports. Often these practices were in place more for historic than for strategic reasons. The protection they afforded was generally available to all firms in an industry, by statute, on a more or less permanent basis, and it often exceeded that which would have been required to avoid significant unemployment or adjustment problems.

Through the seven GATT rounds, substantial progress has been achieved in reducing tariffs on industrial commodities and secondary manufactures, and in the Tokyo Round progress was made toward neutralizing the effects of some traditional non-tariff barriers to imports — e.g., administration of quotas and import licensing, customs valuation procedures, discriminatory excise taxes, and circumscribed aspects of government procurement. This trend greatly increased the potential for inter-industry trade between the United States, Canada and the countries of the European Community, on the one hand, and Japan, on the other; and, later, between all of these countries and the newly industrializing countries (NICs). Reduced protection also opened the door to greater intra-industry trade among all the AICs. From 1948 to 1973, world trade expanded an average of 7 percent annually compared with 5 percent for world production. In contrast, from 1913 to 1948, world trade and production rose about 0.5 percent and 2 percent a year, respectively.

As in all countries, progress in the United States toward the elimination of traditional trade barriers has varied. U.S. average tariffs on dutiable imports fell from about 29 percent in 1946 to about 4 percent in 1985. Also, as a signatory of the Tokyo Round codes governing non-tariff barriers, the United States has eliminated several of its long-standing practices.¹

The United States has, for example, simplified the U.S. customs valuation code, including elimination of final list and American selling price (ASP) valuation. Final list provided for special higher customs valuations on 1,015 items that encompassed about 14 percent of U.S. imports; it was the result of a legislative compromise dating back to 1956. ASP provided for considerably higher valuations on benzenoid chemicals (established in 1922), rubber and plastic footwear (1933), canned clams (1934) and certain wool knit gloves (1936). The United States has also eliminated the wine-gallon method of applying the U.S. excise tax on distilled spirits (\$10.50 per gallon) to imports. This method effectively taxed the water in distilled spirits when products were imported after they had been “cut” with water. Finally, “buy American” discrimination has been eliminated in the purchases of a specified list of federal agencies and departments. This covers approximately two-thirds of direct federal non-strategic goods purchases.

In spite of these modifications, other long-standing U.S. non-tariff barriers remain, and some are of particular concern to Canada. U.S. practices affecting industrial (non-agricultural) products include the procurement code, which does not cover strategic purchases, one-third of federal direct non-strategic purchases, and, for the most part, services. With respect to the former, despite the U.S.-Canada Defense Production Sharing Agreement, several provisions of U.S. law limit the ability of Canadian firms to compete for defence contracts. With respect

to federal purchases covered by the code, the United States obtained a waiver for the application of minority and small business set-asides.

The procurement code does not cover state and local government purchases. When these governments purchase goods or services with money supplied all or in part by the federal government, they are required to follow buy-national policies if so specified by the legislation. The Surface Transportation Act of 1978, the Amtrak Improvement Act of 1978, the Public Works Act of 1977, the Clean Water Act of 1977 and Electrification Act of 1936 all have such provisions. In addition, as of 1980, 35 states and the District of Columbia had some form of buy-national or buy-local legislation on the books.

Industrial and consumer product standards vary among countries owing to differences in consumer preferences and objective conditions. As such, they are a natural barrier to trade, similar in a theoretical sense to transportation costs. However, in some cases, standards are purposely put in place or designed to discriminate against imports. In these circumstances, standards constitute non-tariff barriers to trade. Defining the circumstances in which standards are non-tariff barriers is a difficult theoretical and empirical question. U.S. standards cited by Canadian officials prior to the Tokyo Round as possibly restricting trade include product specifications for plumbing and heating equipment, lumber, fire-fighting equipment, and electrical equipment; Coast Guard inspection of safety equipment used on U.S. flag vessels; the Consumer Product Safety Act and Fair Packing and Labelling Act; and marks of origin requirements.

Further, legislation affecting industrial products includes the Jones Act, which essentially prohibits importation of ships for coast-wide trade and for work (e.g., dredging) in U.S. coastal waters. Also, as described below, the U.S. government provides guaranteed loans, tax benefits and cash subsidies for the purchase and construction of ships in the United States.

Two Alternative Forms of Protection

During the late 1960s and 1970s, economic circumstances began to change, making it more difficult for the United States and other AICs to pursue trade liberalization. Consequently, even as the AICs were negotiating new tariff reductions and codes to govern the application of non-tariff barriers during the Tokyo Round (1973–79), they continued to use two alternative forms of protection. There are several political facts of life which caused this:

- Unlike earlier rounds of GATT negotiations, which eliminated much excessive protection, the Kennedy Round tariff reductions, implemented from 1968 to 1972, cut deeply into the protection necessary to

TABLE 13-1 Examples of U.S. Industries Receiving Selective Protection, 1975-84

Managed Trade Agreements		
Product	Dates	Type of Restriction
Automobiles	1981-	VERS: Japan
Textiles and apparel	1973-	MFA: Country quotas
Colour TVs	1977-82	OMAs: Japan, Taiwan and South Korea
Non-rubber footwear	1977-81	OMAs: Taiwan and South Korea
Specialty steel	1976-80	OMAs: and quotas
Carbon steel	1984-	Decision to negotiate VERS with the major supplying countries announced in September 1984

Article 19 Safeguard Actions

Porcelain-on-steel cookware	1980-84	Additional tariffs
Clothespins	1979-85	Quotas
Industrial fasteners	1979-82	Additional tariffs
High carbon ferrochromium	1978-82	Additional tariffs
CB radios	1978-81	Additional tariffs
Ceramic tableware	1976-78	Additional tariffs
Motorcycles	1983-88	Additional tariffs
Specialty steel	1983-88	Quotas and additional tariffs

Source: Peter Morici and Laura Megna, assisted by Sara N. Krulwich, *U.S. Economic Policies Affecting Industrial Trade: A Quantitative Assessment* (Washington: National Planning Association, 1983), Figure 2-1 and Table 2-7; International Trade Commission.

VER = Voluntary Export Restraints
MFA = Multi-Fibre Agreements
OMA = Orderly Marketing Agreements

avoid significant unemployment and structural adjustments in some industries.

- As growth slowed in the AICs, the adjustments imposed by trade liberalization and other sources of change became more difficult to achieve.
- Japan emerged first as a major exporter of capital-intensive products, such as steel and automobiles, and more recently as a major competitor in technology-intensive products.
- The growing export competitiveness of the NICs imposed new adjustment burdens on the AICs — first in labour-intensive industries and, more recently, in capital-intensive activities.
- The major AICs began to compete more fiercely among themselves in technology-intensive industries as their competitiveness waned, first in labour-intensive and then in capital-intensive activities, and as they became more evenly matched in their abilities to innovate and develop new products.

Selective Protection

With general tariff increases eliminated as a policy option by GATT obligation, the AICs have increasingly turned to what may be called selective protection to manage the unemployment in mature labour- and capital-intensive industries caused by imports from the NICs and Japan. The means include bilateral agreements negotiated under the auspices of the Multi-Fibre Agreement (MFA), Safeguard Actions under GATT Article 19 (temporary additional tariffs and/or quotas), orderly marketing agreements (OMAs), voluntary export restraints (VERs), less formal (unofficial) arrangements, market sharing agreements among AICs, and cartels among producers within AICs. In addition to these trade management practices and agreements, AIC governments have often turned to public ownership and subsidies to maintain employment in these industries. The latter two forms of government intervention have also been used to promote emerging technology-intensive industries as well and are discussed below. By applying such selective protection, individual AICs have been able to limit imports on a discriminatory basis and to alter patterns of competitiveness and trade where required by political pressures, while continuing to enjoy the other benefits of freer trade generally. However, these practices often shift unemployment around among the AICs without addressing fundamental adjustment problems.

In recent years, the number and scope of formal and informal trade management agreements among the AICs and between the AICs and the NICs have expanded. As the summary information in Tables 13-1, 13-2, and 13-3 indicates, the United States, Canada and the major countries of the European Community have, at various times since 1975, used trade management practices and agreements to limit imports of automobiles,

TABLE 13-2 Examples of Canadian Industries Receiving Selective Protection, 1975–83

Product	Dates	Type of Restriction
Textiles and apparel	1974–	MFA: Country quotas and other quantitative restrictions
Automobiles	1981–	VER: Japan
Leather footwear	1977–81	Global quotas
Synthetic footwear	1977–81	Global quotas
Televisions Receivers Chassis	1976–81 1979–83	Duty remission program to encourage domestic production

Source: Based on data supplied by the Institute for Research on Public Policy and the Department of External Affairs.

steel, textiles, apparel, radios and televisions, tableware, and footwear from Japan and the NICs. Similarly, Table 13-4 indicates that Japan has also limited imports of footwear and automobiles.

Further, the United States, the European Community (EC) and Japan have reduced market access through additional safeguard duties or safeguard quotas, on a variety of other products. For example, since 1975, the United States has at times limited imports or imposed safeguard tariffs on porcelain-on-steel cookware, clothespins, industrial fasteners, high carbon ferrochromium, CB radios, motorcycles and specialty steel. In 1983, while the United States was convincing Japan to extend its limits on automobile exports for a fourth year, the EC was persuading Japan to limit exports of videotape records, colour television tubes, light trucks, forklifts, motorcycles, hi-fi equipment and quartz watches. These limits were in addition to restraints already in place for the EC on cars, machine tools and other products. The Japanese, for their part, have restricted market access for many products. Examples include tobacco products, naphtha, petrochemicals, and fertilizer. Moreover, they have organized industry cartels in shipbuilding, pulp and paper, synthetic textiles, synthetic dyestuff, and ethylene. All these cases illustrate an erosion of the multilateral discipline and the free trade ethic and a movement toward overall managed trade in some mature industries.

To put these developments into perspective, consider the situation in four industries — textiles, apparel, steel and automobiles. It seems reasonable to assert that trade is now substantially managed in all of these. In 1981, these industries together accounted for about one-third of U.S. manufactured imports and about one-quarter of all industrial country manufactured imports.

U.S. selective protection can affect Canada in one of two ways even when these measures are aimed at competition from third-country suppliers. First, owing to the similarity of our two markets in terms of average income and tastes and the integration of our production facilities, U.S. policy initiatives can constrain Canadian options, for example, through the voluntary export restraints on Japanese automobiles and the Chrysler assistance program. Second, U.S. safeguard actions can adversely affect Canada because they must be applied on a global basis. For example, U.S. quotas and additional tariffs are applied to Canadian specialty steel even though the United States enjoys a substantial surplus with Canada in this industry.

Conditional Protection

The trend toward increased competition among the AICs in technology-intensive activities has given rise to a second protectionist trend that may be called conditional protection. Specifically, AIC governments

have perceived the opportunity, and in some cases the need, to influence international patterns of specialization and trade and occasionally to create comparative advantages. Such protection is often provided on a targeted and strategic basis to firms or industries undertaking activities consistent with a government's industrial development aspirations or is intended to encourage or accelerate the movement of resources into a particular group of industries or activities and out of others. Desired actions may include entry into particular markets such as semiconductors and aerospace, or undertaking generally desired activities, such as research and development and exporting. Government practices have included but are not limited to:

- various forms of domestic production and employment subsidies;
- export incentives; or
- performance requirements for foreign investors and administrative guidance for domestic companies in procurement and investment.

U.S. efforts have been primarily limited to domestic production and employment subsidies and export incentives.

Domestic Production Subsidies

Domestic production subsidies have become an important means for helping new or existing domestic firms to challenge established foreign multinational corporations (MNCs) in high-technology activities such as the Airbus in Europe or computer chips in Japan; or for achieving a leadership position in emerging activities such as robots and fifth-generation computers in Japan. They have also become an important means for encouraging adjustment in mature industries or maintaining employment in these activities, such as steel in Europe.

National governments subsidize domestic production and employment in a variety of ways: through cash payments, special tax deductions and credits, and benefits-in-kind. The latter may include government technical assistance to firms financed with tax dollars, or price regulations that force an industry to sell its product at below-market prices and thereby implicitly tax the regulated industry and subsidize its customers. Subsidies may also arise from the government provision of credit at below-market interest rates and from public ownership or equity participation. Public enterprises are clearly subsidized when they continually operate at a loss thanks to government transfers of cash. But they are also subsidized if they operate at a below-market rate of return because governments are willing to accept below-market returns on equity. In several technology-intensive and mature industries, public ownership has been important. This is true in at least some of the major AICs. Examples include aerospace in France, Britain and Canada; computers in France, Britain and Japan (through leasing companies); chemicals in France and West Germany; and steel in France, West Germany, Britain and Canada.

TABLE 13-3 Examples of European Industries Receiving Selective Protection, 1975-81

Product	European Economic Community	France	West Germany	Italy	Britain
Automobiles		Informal agreement: Japanese market share limited to approximately 3 percent market	VER: Japan, 1981-84	Quotas: Japanese imports limited to 2,200 vehicles per year	Informal agreement: Japanese imports limited to approximately 10 percent market
Iron and Steel	EEC minimum price mechanism for steel and VERs for several countries, 1977-				
Textiles and apparel	EEC countries negotiate import limits under MFA	Country quotas under MFA	Country quotas under MFA	Country quotas under MFA	Country quotas under MFA

Radios, TVs and communications equipment	VER: Japan, colour TVs, 1981	Bilateral quotas and discretionary licensing on radio-telephonic receivers, TV receivers and transistors; prohibition on radios from Korea	Bilateral quotas on radio-telephonic and TV receivers and transmitters, tubes and valves: Japan	Import quotas on black and white TVs: Taiwan, Korea
Tablewear		Bilateral quota: Japan	Bilateral quota: Japan	
Footwear			Bilateral quota: Japan	Quantitative restriction: Taiwan

Sources: U.S. Department of Transportation, *The U.S. Automobile Industry*, 1980; German Embassy; The European Commission; U.S. Trade Representative, Foreign Trade Action Monitoring System (May–August, 1981); IMF Trade and Payments Division, *The Rise of Protectionism* (Washington, 1978); William R. Cline, *Exports of Manufactures from Developing Countries* (Washington: Brookings Institution, 1984).

TABLE 13-4 Examples of Japanese Industries Receiving Selective Protection, 1981–82

Product	Type of Restriction
Leather products and footwear (excluding sportswear)	Quotas
Automobiles	Multi-layered distribution system limits foreign manufacturers' access
Tobacco products	Sales of foreign tobacco products limited to 70,000 of Japan's 250,000 retail establishments; advertising expenditures subject to a ceiling
Naphtha, petrochemicals and fertilizer	Informal industry agreements
Shipbuilding Pulp and paper Synthetic textile dyestuff Ethylene	Industry cartels for depression management, nationalization, and other antitrust exemptions that may limit imports

Source: U.S. Trade Representative, "Japanese Barriers to Trade" (Washington: November 1982), mimeographed.

U.S. programs assisting manufacturing and potentially affecting trade may be divided into two groups — general programs providing benefits to many industries and industry-specific programs.

Over the last decade, general assistance programs have included:

- tax incentives for research and development whereby firms are permitted to deduct the full cost of capital equipment used to undertake research and development when incurred, instead of depreciating the equipment over its useful life; and the tax cut passed by Congress in 1981 which included tax credits for a portion of qualified operating expenses such as wages, supplies and leasing computers;
- benefits-in-kind through crude oil and natural gas price regulations;
- adjustment and regional development assistance to firms through loans, loan guarantees and insurance and technical assistance provided by the Small Business Administration, Economic Development Administration and Farmers Home Administration, although since 1981, these programs have been greatly reduced in size as a result of federal budget cuts; and
- industrial revenue bonds (IRBs) whereby firms in industrial and non-industrial sectors may obtain below-market financing if a state or local government will assist financing by issuing tax-exempt IRBs.

Industry-specific programs have included:

- in shipbuilding — Maritime Administration loans, loan guarantees and cash grants, special tax deferral programs for ship operators to renew their fleets (although these programs have also been greatly reduced in scope since 1981);
- in footwear — loans, loan guarantees and technical assistance administered under the Footwear Industry Revitalization Program (1977–80);
- in textiles and apparel — loans, loan guarantees and technical assistance under a special Department of Commerce adjustment assistance program (1979–80);
- in steel — a special \$550 million loan guarantee program administered by the Economic Development Administration (1978–79); and
- in automaking — \$1.2 billion in federal loan guarantees, as well as financial aid from state and local governments to the Chrysler Corporation (1980–82).

Export Incentives

Like other AICs, the United States promotes exports through direct loans, loan guarantees and insurance, tax incentives, bilateral tied aid and other activities. These programs provide such services and agencies as:

- export credits — the Export-Import Bank (EXIM) provides direct loans, loan guarantees and insurance, and discounts loans (EXIM is assisted in its efforts by the Private Export Funding Corporation and the Foreign Credit Insurance Association);
- Overseas Private Investment Corporation (OPIC) — U.S. exports are promoted indirectly through OPIC loans, loan guarantees and insurance to U.S. foreign investors;
- Domestic International Sales Corporations (DISCs) — by establishing DISCs U.S. firms may defer taxes on export earnings (in 1984, the United States replaced most DISCs with Foreign Sales Corporations);
- tied aid — through the Agency for International Development (AID) and the Department of Agriculture, the United States employs tied bilateral aid to promote U.S. exports; and
- export marketing — U.S. exports are promoted through the marketing efforts of the Department of Commerce.

In a recent study, Morici and Megna (1983) estimate the subsidies implicit in these programs (see Table 13-5).

Outlook for U.S. Trade Policy

The future course of U.S. trade policy will be determined by the interaction of two competing sets of political and economic forces. First, the

Reagan Administration, consistent with its general approach to economic policy, is committed to trade liberalization. This view was expressed early in the Reagan presidency in a white paper on trade policy.² In terms of concrete actions, the administration has:

- sought to enforce U.S. rights under the GATT;
- advocated multilateral negotiations to establish rules to govern trade in services, to constrain the use of subsidies affecting high-technology industries and to control those aspects of foreign investment policy that may distort trade; and
- pursued bilateral negotiations where they were perceived to be potentially productive.

Of course, the reality of the administration's trade policy has not matched its stated philosophy in all areas. Domestic political pressures have caused it to accept import restraints it probably would have preferred to avoid. These political pressures stem from underlying conditions in the United States and international economies, which are exerting influence on sentiments in the Congress.

TABLE 13-5 Subsidies to U.S. Manufactured Exports

	(percent)			
	Estimates		Projections	
	1976	1979	1982	1985
Export Credits (EXIM)	0.71	0.45	0.42	0.42
OPIC	0.72	0.32	0.62	0.56
DISCs	0.96	0.75	0.75	0.64
Tied Aid	0.36	0.25	0.21	0.18
Other (Export)	0.01	0.01	0.01	0.01
TOTAL	2.76	1.78	1.91	1.81

Source: Peter Morici and Laura L. Megna, *U.S. Policies Affecting Industrial Trade: A Quantitative Assessment* (Washington: National Planning Association, 1983), Table 4-13, p. 92; figures for EXIM (and total) revised to reflect more current data.

Second, the scope of the adjustments the U.S. economy must achieve to remain competitive and enjoy high levels of employment is as extensive now as at any time in the postwar era. Even if a major recession is avoided and economic recovery continues, this will become more, rather than less, obvious. Many workers and communities dependent on mature industries are being left behind. High levels of seemingly intractable structural unemployment are the greatest single outward mani-

festation of the required adjustments. Although less apparent, owing to higher rates of growth, competitive pressures in technology-intensive industries are also great, because U.S. trading partners are much more able competitors in these sectors than they were a decade or two ago. These adjustments stem from significant changes in comparative advantages, as well as an accelerated pace of technological change, that are dramatically altering the structure of goods demanded and the processes and materials used to make them, and these adjustments are exacerbated by an overvalued dollar that in part results from U.S. budget deficits. The costs imposed by these adjustments give rise to pressures within the Congress to insulate or assist affected workers and firms.

Moreover, in recent years, many Americans have embraced the view that the United States does more to maintain and promote a liberal international trading system than do its major trading partners and that U.S. competitiveness problems are the result in some substantial way of foreign trade-distorting practices. Regardless of whether this perception is justified, it has had a powerful impact, along with the cost of structural adjustments just mentioned, on the protectionist sentiments held by many members of Congress.

This set of forces has given rise to many legislative proposals that could further restrict foreign access to U.S. markets — for example, regulations on automotive domestic content, various forms of reciprocity and industrial policies — and measures to strengthen laws that protect U.S. firms from the effects of foreign subsidies and dumping.³

The outcome of the 1984 election, at both the congressional and presidential levels, could have important consequences on the effectiveness of the executive branch in resisting protectionist pressures. A president who does not face a re-election campaign is less susceptible to individual industry efforts to obtain import protection, especially in cases where the industry is unable to prove that imports are a substantial cause of injury, and thus to qualify for safeguard protection. However, a major shift in Congress towards more protectionist sentiments, whether caused by changes in House and Senate membership or changes in incumbents' views, could constrain even a second-term president's capacity to resist protectionist pressures.

Notes

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1. These changes in U.S. trade laws and further details on remaining non-tariff barriers are discussed in detail in Peter Morici and Laura L. Megna, *U.S. Economic Policies Affecting Industrial Trade: A Quantitative Assessment* (Washington: National Planning Association, 1983).
2. U.S. Trade Representative, *Statement on U.S. Trade Policy* (July 8, 1981).
3. Indeed, the Trade Act of 1984 contains provisions strengthening U.S. trade law covering unfair trade practice (Section 301) and subsidies and countervailing duties.



Some Observations on Non-Tariff Barriers and Their Use in Canada

ANDREW R. MOROZ

A major issue in current discussions on trade and trade policy is the increased presence in the international trading system of policy instruments other than tariffs that distort and restrict trade flows. Such policy instruments are commonly referred to as non-tariff barriers (NTBs). Unlike tariffs, NTBs rarely take the form of an explicit tax on imports. They comprise a wide range of dissimilar measures and they frequently involve administrative procedures as well as legislative requirements. Nor is the use of NTBs limited to restricting imports; most major trading countries employ a variety of policy instruments to support or promote exports. However, not all policy instruments that affect trade flows are used with the explicit intention of providing trade protection, be it import restriction or export promotion. As a result of numerous economic developments, international trade flows and hence investment flows have become increasingly sensitive to policy actions outside the trade policy sphere.¹

Why NTB Use Has Increased

There are many reasons why NTBs have become more important in recent years. One significant reason is the past success of the GATT in lowering tariff rates and imposing upper levels on them. The tariff walls that once surrounded most national economies have been largely dismantled, leaving only pockets of high tariff protection. One result of lowering tariff rates has been the increased visibility and protective effect of those NTBs already in place. The second major reason is the increased use of NTBs to restrict imports or promote exports. With both the recession and structural economic changes fueling demands for trade protection, and the GATT agreements restricting the use of higher

tariff rates, many countries have turned to NTBs as substitutes for tariffs to provide trade protection to their industries. And although the GATT sanctions the use of certain types of NTBs under specific conditions, many of the NTBs developed and employed in recent years are outside the GATT rules.

The use of NTBs has also grown because tariffs have proved to be an ineffective instrument of protection against foreign competition, particularly from Japan and the newly industrialized countries, in certain traditional industries. This is quite evident in the steel sector, the automotive sector, and the textile and clothing sector where many developed countries have imposed quantitative restraints on exports from selected countries. In the case of textiles and clothing, the use of bilateral export restrictions has been formalized under the Multi-Fibre Arrangement (MFA). Virtually every major developed country limits Japanese automobile exports to its market through bilaterally negotiated export restraint arrangements. Moreover, many developed and underdeveloped countries require that automotive companies selling in their markets meet domestic content requirements, and it is possible that automotive trade may also some day be formally managed under an MFA type of arrangement. Trade in steel products is also distorted by bilateral quantitative restraints. These are all examples of the use of NTBs outside the explicit rules of the GATT to discriminate selectively against specific exporters. At the same time, the increased use of NTBs, particularly at the bilateral level, is part of the growing trend to develop customized policy packages to deal with structural and developmental problems on a sectoral basis, particularly in those high technology sectors which are considered to be of strategic importance to national economic development.

Yet more than just trade protectionist pressures are involved in the increase of policy instruments that directly affect international trade flows and investment decisions.

Since the 1950s, governments have substantially increased their direct involvement and intervention in the economy, and have taken on greater and greater responsibility for the fortunes of individual industries, regions, groups and persons. In a period of rapidly changing economic conditions, national and subnational governments have employed these devices not only to protect their domestic industries but also to protect their wider domestic policy interests from the exposure of the domestic environment to international competition, international economic forces, and foreign government policies. At the same time, the increased openness and global integration of national economies, together with greater direct government involvement in the domestic economy, have caused trade flows to be more sensitive to domestic policies. In many cases, the policy objectives are not trade protection per se but the pursuit of broader national economic and non-economic objectives. But

because such policies do affect the trade and economic interests of other countries, they are frequently labelled NTBs, and the growing sensitivity of trade flows to domestic policy actions raises major issues and problems for bilateral and multilateral trade policy relations and negotiations.

The Canadian Experience

While the use of quotas, subsidies, and other NTBs has a long history in Canadian trade policy, Canada has traditionally relied on the tariff system as its principal instrument of trade protection. However, Canadian tariff rates have been reduced and bounded through successive GATT rounds, and by 1987, most industrial tariff rates will be below 10 percent. As regards trade with the United States, about 65 percent of U.S. exports will enter Canada duty free and an additional 25 percent at rates below 5 percent. Canadian exports to the United States will also face lower tariff rates, with approximately 80 percent of Canadian exports entering the United States duty free and a further 15 percent entering at tariff rates less than 5 percent. As part of its tariff protection, the Canadian Fair Market Value valuation system has also played a long-standing and important role. During the Tokyo Round of GATT negotiations, the contracting parties negotiated a new customs valuation code and, as discussed in Appendix B, Canada is expected to change its customs valuation system by 1985.

While Canadian tariff protection remains, on average, higher than that in most other industrialized nations, Canadian policy makers, like their counterparts in other countries, have found themselves under increasing political pressure to protect domestic industries from imports and to support their exports. With the tariff option limited as a means of protection against imports, the federal government and provincial governments have responded in certain instances with various types of import-restricting NTBs. At the same time, the Canadian governments have introduced new programs and expanded old programs to support and promote exports. Meanwhile, long-standing Canadian policies to promote industrial, regional, or sociocultural development have come under increasing scrutiny and criticism by Canada's major trading partners.

Table 14-1 lists some of the NTBs used in Canada. In general, Canadian NTBs can be divided into three broad groups: defensive measures, proactive or industrial policies, and sociocultural policies. The last group includes technical and safety standards as well as promotion of cultural industries through such policies as public ownership and subsidization of the CBC, lower postal rates for magazines and periodicals printed and published in Canada, and the disallowance as income tax deductions of Canadian advertising placed with U.S. border TV stations and foreign-

published magazines. While sociocultural policies are usually excluded from discussions on NTBs because of their non-economic objectives, the postal rate policy and Canadian electrical standards have been criticized as barriers to trade by the United States, and the border broadcasting issue has developed into a major bilateral dispute. Notwithstanding the growing importance of such policies in affecting trade, the other two groups of NTBs are far more important in terms of their use and their impact on the Canadian economy.

TABLE 14-1 Canadian Policies That Distort Trade

Policies	Products or programs
Voluntary export restraints	– automobiles from Japan, textile products and clothing products from many Third World countries under the Multi-Fibre Arrangement
Global quotas and import prohibitions	– footwear, butter, milk and milk powder, wheat, oats, barley, eggs, poultry, used cars, used aircraft
Export controls and prohibitions	– logs and/or pulpwood cut on provincial lands in B.C., Quebec, and Ontario
Government procurement	– federal and provincial governments and Crown corporations
Provincial liquor commission monopolies	– Ontario and B.C. mark-ons for imports, listing policies
Customs valuation system	– ministerial prescription on selected products from specific countries, tariff classification, determination of fair market value as value for duty
Performance requirements and domestic content requirements	– Foreign Investment Review Agency, National Energy Program, Auto Pact, most subsidy programs, government procurement, major defence contracts, radio and TV programming
Current subsidies	– Shipbuilding Industry Assistance Program, Federal Labour Intensive Program and other labour subsidies, provincial subsidies for labour
Capital subsidies	– Defence Industry Productivity Program, General Development Agreements, Industrial and Regional Development Program, Canadian Industrial Renewal Board, provincial subsidies for purchasing fishing equipment

Research and development subsidies	– Industrial Research Assistance Program, Energy Research and Development Program, Enterprise Development Program, Defence Industry Production Program, New Technology Employment Program
Transportation subsidies	– Crow's Nest Pass Agreement, Maritime Freight Rates Act, Atlantic Region Freight Assistance Act, Federal Freight Assistance Act
Export subsidies	– Program for Export Market Development, Promotional Projects Program, subsidized export financing provided by the Export Development Corporation
Indirect subsidies to producers via government regulation	– energy pricing, postal rates for Canadian magazines and periodicals
Financial support	– subsidized loans, loan guarantees, government equity, Federal Business Development Bank, Ontario Economic Development Corporation
Duty remission programs	– automobiles and components, power cruisers, televisions and parts, sewing machines, off-highway vehicles
Bilateral tied-aid program	– feed grains, powdered skim milk, electrical machinery and equipment, rail transportation equipment

Defensive Policy Measures

Canada, like other countries, has taken defensive steps to protect domestic industries and workers from changes in the international economy and from growing import competition. In 1981, Canada went outside the GATT rules and negotiated a one-year automobile export restraint arrangement with Japan. This has been renegotiated in each subsequent year, and in 1983, the Canadian automotive industry argued strongly but unsuccessfully for domestic content legislation to further protect Canadian production and jobs from Japanese competition. The Canadian textile and clothing sector also benefits from quantitative restraints negotiated bilaterally with numerous Third World countries under the MFA. In 1977 and again in 1981, Canada took action under Article XIX of the GATT to impose global quotas on most footwear imports. Canada has also used defensive subsidies to protect the Canadian shipbuilding industry from international market forces and foreign policies.

The number and frequency of petitions by Canadian firms for contingent protection under the Canadian anti-dumping legislation have also increased significantly in recent years.

Compared to both the United States and Europe, however, Canada has resorted less frequently to export restraints, safeguard actions, or other outright defensive actions to protect domestic manufacturing industries. And in many cases, Canada has felt obligated to act defensively because of the fear of export dumping when, as in the case of the U.S. restraints on Japanese automobile exports, one or more of the major trading nations have restricted access to their markets through their own outright defensive trade policy actions.² It is worth noting, however, that one reason for Canada's less frequent resort to defensive actions is the already active involvement in and support of its domestic manufacturing industries by Canadian governments through their industrial policies.

Canadian agriculture is also protected by defensive policies, and the two principal instruments used to protect agricultural production, jobs, and incomes are quantitative restraints and subsidies. In most cases, the quotas and embargoes on agricultural and food imports are supplementary instruments to other policies such as marketing boards which are used to stabilize and support the income of farmers. These income support programs are further reinforced by a wide range of subsidies including production, transportation, storage, and marketing subsidies. The bilateral tied-aid program and subsidized export financing are also used to dispose of surplus agricultural production and hence support Canadian production levels. Canada is by no means unique in directly supporting and protecting its agricultural sector, and international trade in agriculture is severely distorted through import restrictions, managed trade agreements, and export market dumping.

Industrial Policies

Canada employs a variety of policy instruments to foster economic development. These policies are commonly referred to as "industrial policies," and as Canada is a small, open economy, such policies can significantly affect Canadian imports or exports even if they are not directed intentionally to import substitution or export promotion. The main objectives of Canadian industrial policies are:

- to increase domestic processing of resources and downstream manufacturing and thereby to reduce dependence on resource exports;
- to stimulate the development of capital goods and high technology industries;
- to restructure traditional industries to improve their productivity and competitiveness;

- to increase the level and to alter the structure of employment;
- to balance regional development, income, and employment; and
- to foster the growth of small business.

The three major non-tariff policy instruments employed by Canadian governments to reach these objectives are subsidies, government procurement, and performance requirements.

Subsidy Programs

Subsidies are probably the most widely used industrial policy instrument in Canada. The term “subsidy programs” generally refers to a heterogeneous set of public policies that reduce a producer’s costs of developing, producing, or distributing a good relative to the costs of other producers of that good. By doing so, a subsidy program provides the producer with an artificial competitive advantage, and the subsidy itself is the reduction in that producer’s current costs of supplying the good.

Subsidy programs can be divided into three broad groups: current subsidy programs, which directly subsidize the producer’s current costs of producing and distributing output; capital subsidy programs, which indirectly subsidize current costs by reducing the producer’s costs of capital and technological assets; and export subsidy programs, which subsidize the costs of exporting. In most cases, the subsidy program provides the subsidy directly to the industry intended to benefit from the cost reduction. There are, however, some federal government programs, for example, the Maritime Freight Rates Act, that provide a cash grant subsidy to one industry for the purposes of subsidizing the cost of an input purchased by a second, specifically designated industry. Such current subsidy programs are referred to as conditional indirect subsidy programs for the second, specifically designated industry.³

The most frequent form of delivery of the subsidy is a cash grant, although subsidies are also provided through government regulations, government ownership, low interest or fixed interest rate government loans, government loan guarantees, tax credits and deductions, and duty remission programs. In the case of current subsidy grant programs, most of the industry and regional development programs, along with a few of the agricultural and transportation subsidy programs, are administered by the Department of Regional Industrial Expansion. The export marketing subsidy programs are handled by the Department of External Affairs, and official export financing and export insurance for capital goods exports are available from the Export Development Corporation. The major transportation subsidy programs are operated by the Department of Transportation, and most agricultural subsidies are administered through agencies such as the Canadian Dairy Commission that are funded by the Department of Agriculture.

As shown in Table 14-2, every major industry group in Canada benefits from subsidy programs. Federal and provincial current subsidy programs include income support programs, labour and labour training programs, marketing programs, and transportation programs. Between 1971 and 1980, the nominal and the real value of grants paid to domestic industries under current subsidy programs alone grew by over 375 percent and by over 225 percent respectively, although as a percentage of each industry's costs, these subsidies remain quite small in most cases. The largest recipient of current subsidy grants is the services sector. Many of these grants provided to service industries are, however, conditional indirect subsidies for selected manufacturing industries. Outside the services sector, the agricultural and food sector is the major recipient of grants from current subsidy programs, including conditional indirect subsidy programs such as the Crow's Nest Pass Agreement and the Feed Freight Assistance Act. The mining sector also benefits from current subsidy grant programs, as indicated in Table 14-2, as well as receiving favourable tax treatment of resource development costs and resource depletion.

In the manufacturing sector alone, the real value of current subsidy grants grew during the 1970s by over 400 percent, albeit from a very low base, and this expansion was shared by virtually every industry. The individual manufacturing industries that receive the largest grants to subsidize current costs are the dairy products industry, the feed mills industry, the metal stamping industry, the industrial machinery and equipment industry, the communications equipment industry, and the industrial and other chemicals industry. Since 1980, additional funds have been added to most current subsidy grant programs operated by the Department of Regional Industrial Expansion, a number of programs have been revised or merged, and new programs have been created. As shown in Table 14-2, manufacturing industries also benefit from an indirect energy subsidy because of the domestic energy pricing policy, although, given the recent convergence of Canadian and world energy prices, this indirect energy subsidy has fallen considerably in the last few years.

The federal government and to a lesser extent the provincial governments also provide cash grants, subsidized loans, and tax benefits for capital equipment purchases and R&D activities. Over the 1970s, the real value of grants for purchases of capital equipment remained relatively stable, although some growth in the real subsidy amounts has occurred since 1980. The largest capital equipment grant program is the Regional Industrial Development Act (originally operated by the DREE and now operated by the DRIE) and these capital equipment grants have been distributed across all manufacturing industries. Grants for production equipment are available to producers of defence products from the Defence Industry Productivity Program. Federal and provincial govern-

ments have also provided capital grants in special circumstances such as the federal and Ontario grant of \$68 million in 1978 for an automotive parts facility. Canadian firms can also apply for low interest rate loans to purchase capital equipment under various federal government programs. The most important source of subsidies for capital equipment purchases is, however, the tax system. Most investments in production machinery and equipment are eligible for the investment tax credit introduced in 1975 as well as the accelerated depreciation rate allowed under the capital cost allowance tax rules introduced in 1972.

Like many other developed countries, Canada has designated the high technology sector as a key sector for economic development, growth and exports. At the same time, technological improvement is viewed as an important element of the restructuring of Canada's traditional industries in order to improve productivity and competitiveness. To stimulate the level of domestic R&D and technological development, the federal government operates a number of R&D grant programs and provides R&D tax deductions and credits. Although both the nominal and real values of R&D grants declined during the 1970s, this was offset by the introduction of and increase in tax credits for R&D activities during the 1970s. Since 1981, funding of the two major federal R&D grant programs, the Enterprise Development Program and the Defence Industry Productivity Program, has increased substantially. The largest recipients of R&D grants are the aircraft industry and the communications equipment industry.

Canada supports and promotes exports through a variety of export subsidy programs. The Export Development Corporation (EDC) provides long-term export financing at low fixed interest rates for major capital goods export sales. The subsidy value provided by EDC export credits can be as high as 10 percent of the export sale for such industries as the rail transportation equipment industry, the shipbuilding industry, the nuclear power equipment industry, and the communications equipment industry. The EDC also offers export loan guarantees and various types of export insurance policies for all exporters. Under the Program for Export Market Development, the federal government contributes to the costs that companies incur in bidding for major projects abroad, visiting and identifying new markets, participating in trade fairs, undertaking marketing studies, establishing facilities abroad, and setting up export consortia. Recently, some provinces have begun to provide support for exports through export market development and promotion programs.

Exports by certain industries such as agriculture, the feed mills industry, and the electrical industrial equipment industry are also supported through the bilateral tied-aid program. Grain exports are subsidized indirectly by low transportation costs under the Crow's Nest Pass Agreement rate system and other transportation programs. Canadian defence

TABLE 14-2 Subsidies to Industry in 1978

Industry	Direct current subsidies ^a	Indirect energy subsidies ^b	Conditional Indirect subsidies ^c	Explicit export subsidies ^d	Current equivalent of capital and R&D subsidies ^e	Total subsidies ^f
(Millions of dollars)						
Agriculture	649.47	127.21	473.15	10.94	39.44	1,300.21
Forestry	4.07	23.14	7.73	-	0.85	35.79
Fishing, hunting and trapping	19.50	11.44	2.54	-	6.18	39.66
Petroleum and gas wells	39.52	(1,355.8) ^g	-	-	10.50	(1,305.78)
Mining	19.28	87.92	4.38	0.34	37.33	149.25
Food and beverage	133.53	51.08	12.61	40.19	28.18	265.59
Rubber	2.12	9.55	0.97	0.05	7.96	20.65
Textile, leather, and clothing	7.86	17.13	1.63	0.04	9.67	36.33
Wood and paper products	21.78	153.89	35.02	2.18	59.17	272.04
Primary metal products	62.09	90.71	2.13	0.09	31.73	186.75
Metal fabricating	8.53	19.98	1.22	5.45	12.57	47.75
Machinery and equipment	3.29	7.46	0.35	37.98	28.09	77.17
Transportation equipment	7.20	24.99	1.13	21.42	63.29	188.03
Electric products	3.07	10.95	0.64	21.68	35.25	71.59
Nonmetal mineral products	2.63	51.18	1.07	0.09	9.16	64.13
Petroleum and chemical products	4.66	155.12	2.80	0.61	44.75	207.94
Other manufacturing	3.70	4.76	1.28	0.25	8.74	18.73
Services	1,745.82	383.64	-	9.13	16.50	2,155.09
Total	2,808.12	1,230.15 ^h	548.65	150.44	449.36	5,186.72 ^h

Source: Current work underway at the Institute for Research on Public Policy.

- a. Direct current subsidies are current subsidies that are paid directly to the industry benefitting from the subsidy. Included in the estimates are all federal and provincial current production subsidies provided in the form of grants for purposes of subsidizing income deficiencies, labour inputs, other current inputs, and transportation and other distribution costs.
- b. The indirect energy subsidy is an estimate of the cost savings provided to domestic industries by the direct regulation of Canadian domestic petroleum and natural gas prices and the indirect regulation of the domestic prices of refined petroleum products, electric power and pipeline transportation. The estimates shown are net of lost revenues associated with lower domestic prices for output of energy and energy products produced by each industry.
- c. Under certain programs, the industry directly receiving the subsidy — the recipient industry — is not the industry ultimately benefitting from the subsidy — the beneficiary industry. When the recipient industry does not retain the subsidy but passes it on fully and exclusively to a second, specifically targeted industry, then the latter (beneficiary) industry is given a conditional indirect subsidy. In certain instances, a conditional indirect subsidy is provided through government regulations. Included in the estimates are transportation subsidies provided under the Maritime Freight Rates Act, the Atlantic Region Freight Assistance Act, the lower postal rate for Canadian magazines and periodicals, and the Crow's Nest Pass Agreement.
- d. Includes estimates of the subsidies provided to exports by the bilateral tied-aid program, export financing by the Export Development Corporation, and market promotion under the Program for Export Market Development.
- e. The current subsidy equivalent is equal to savings in principal and interest payments in 1978 for capital and R&D grants received by each industry from 1974/75 to 1978/79. Estimates include the Regional Industrial Development Act, Defence Industry Productivity Program, Enterprise Development Program, Industrial Research Assistance Program as well as other, smaller federal programs and certain provincial programs.
- f. This is the pre-tax value to the industry. Most subsidies are taxable; consequently, the net value to the producer is lower.
- g. Estimate of the net reduction revenue resulting from the Canadian energy pricing policy.
- h. Excludes negative study to petroleum and gas wells.

exports are indirectly supported by the Defence Industry Productivity Program, which subsidizes the R&D costs for military export projects, and Canadian defence producers also benefit from increased access to the U.S. defence market under the Canada-United States Defence Production Sharing Agreement. The Canadian automotive sector and the Canadian economy also benefit greatly from duty-free access to the U.S. market under the Canada-U.S. Automotive Products Trade Agreement. Under this agreement, Canadian automotive production was rationalized to serve the North American market and a major portion of the restructuring investment costs and exports in the late 1960s and early 1970s were indirectly subsidized by Canadian consumers through higher prices.⁴

The impact of different types of subsidies on economic activity and trade flows is difficult to measure and hence to compare. For example, regional development subsidies, transportation subsidies and provincial subsidies may simply shift production from one region to another and therefore have no impact on the national level of output, exports or imports. Labour and energy subsidies may significantly alter the relative use of different inputs in production with little or no effect on the levels of production and trade. Capital equipment and R&D subsidies may not affect current levels and patterns of production and trade but can have significant impacts on future levels and patterns. Overall, it is likely that most Canadian subsidies directly affect trade flows, if only because of the smallness and openness of the Canadian economy.

There are, however, other important concerns about the intentions and use of subsidy programs. For example, there is a major debate over whether the real purpose of industrial and labour adjustment programs is to foster economic adjustment or to provide disguised protection to workers and industries such as the footwear industry and the textile and clothing sector. More important, there is a growing problem for Canada in relying on subsidies as the major tool of industrial development. For a subsidized industrial project to be successful in Canada, it is likely that a major share of the subsidized output must be exported. This may expose Canadian industries to foreign countervail duty actions or other forms of counteraction through the use of NTBs. It is not only explicit export subsidies that are under threat from countervail actions. This was demonstrated by the Michelin case, which involved DREE grants, and the recent unsuccessful U.S. countervail petition against Canadian exports of softwood lumber where provincial stumpage fee regulations were alleged to provide a subsidy to Canadian producers. The United States has also strongly criticized the duty remission program for Volkswagen. Canada could well face future actions against any of its economic development programs that involve direct or indirect subsidies.

Government Procurement

Canadian government procurement policies have long been used to protect domestic industries and encourage industrial development. Total direct purchase by all governments in Canada amount to about \$35–40 billion, accounting for approximately 10 percent of total GNP. If federal and provincial Crown corporations, agencies, hospitals, and educational institutions are included, then public purchases approach \$60 billion, or approximately 18 percent of total GNP. The federal government is the single largest purchaser, although in terms of total purchases, the provinces and municipalities account for over 60 percent of all government purchases.

Federal purchases fall into two major groups: defence purchases and non-defence purchases. With regard to defence purchases, Canada and the United States cooperate under the Canada-U.S. Defence Production Sharing Program, which provides duty-free bilateral trade in military products and allows Canadian and U.S. companies relatively uninhibited access to the specification lists and bidding process for defence contracts in both countries. However, the Canadian federal government has sought major industrial offsets from the U.S. prime contractor in every major defence contract. Such offsets usually involve commitments to choose Canadian firms for subcontract work and to purchase Canadian goods, materials, and services, and the demand for Canadian offsets could pose major bilateral problems in future large defence contracts.

There is no “buy Canadian” act that sets out the rules and procedures for federal purchases of non-defence goods and services. Instead, there is a maze of administrative rules and guidelines, ranging from informal general price preferences to administrative bans on imports of certain goods, which constitute an extensive system of “buy Canadian” practices. Federal procurement of non-defence goods and services is largely regulated by the Financial Administration Act, government contract regulations, certain chapters of the Treasury Board’s administrative policy manual, and the Department of Supply and Services’ supply policy manual. The main feature of the federal procurement system is the discretionary administrative approach to federal purchases.

The most important federal agency controlling the federal government’s procurement of goods and related services is the Department of Supply and Services (DSS). It acts as a central purchasing agent for most federal departments and contracts about 40 percent of the total federal purchases of goods and related services. Major purchases of non-defence goods and related services include communications equipment, chemicals and chemical products, and scientific instruments and laboratory equipment.

The DSS procedures for purchasing goods and related services show two major forms of domestic preference: a priority classification for domestic sources as opposed to foreign sources in the bid solicitation system, and an informal premium for domestic content which allows Canadian producers to bid above the prices of bids from foreign sources and still be awarded the contracts. The informal premium is 10 percent of the difference in the amount of Canadian content in each bid. The selection process, however, is perhaps the more effective form of discrimination. The DSS uses a source list identifying qualified bidders, and suppliers are divided according to four priority classifications:

1. Canadian-based manufacturers producing in Canada, including Canadian-based manufacturers who have “rationalized” their production to the benefit of Canada but do not produce the specific product in question in Canada;
2. Canadian-based companies providing suitable after-sales service but acting as agents of foreign manufacturers;
3. other Canadian-based companies acting as agents of foreign manufacturers; and
4. foreign-based manufacturers.

The DSS usually restricts the selection of sources to the first group if there are three or more eligible sources. Furthermore, most major contracts are filled without going through the public tender process, with over two-thirds of the value of total DSS purchases negotiated directly with preselected suppliers.

The bulk of federal government purchases from the private sector are services, the largest single item being construction services. Federal procurement of construction services is largely administered by the Department of Public Works. Canadian preference occurs in the form of a standard clause in construction contracts requiring the general contractor to employ Canadian material and labour to the maximum extent feasible. Other important federal purchases of services include R&D, printing, and business services, and these purchases are governed by the DSS guidelines. Crown corporations and other federal agencies, such as Air Canada and Canadian National Railways, are also expected to follow the DSS guidelines.

Other general features of the federal government procurement policy for purchases of non-defence goods and services include the Source Development Fund, which subsidizes companies developing products procured by the federal government for which no Canadian sources presently exist, and the Unsolicited Proposals Program, which encourages R&D project proposals and is heavily oriented toward Canadian-owned firms. In addition, companies bidding on contracts worth more than \$2 million must submit in their bid a Canadian business opportunities plan documenting the subcontracting intentions in the tender.

The federal government has further specified that 40 percent of its purchases must be from small business. It also takes direct account of regional sourcing in its evaluation process. For large on-going contracts awarded to foreign-owned multinational enterprises, the policy is to negotiate offsets in terms of product mandates and R&D mandates for their Canadian subsidiaries.

The chief complaint by foreign countries about the Canadian federal procurement policy is the lack of transparency and public information. Canada is a signatory of the Code on Government Procurement negotiated during the Tokyo Round, and it is estimated that up to one-sixth of direct federal government purchasing has been open to international bidding. The Procurement Code pertains only to explicitly identified federal entities and to purchases above \$220,000. Recent federal government announcements continue to promote government procurement policy as a tool for industrial and economic development, and while stating that Canada will not violate its international obligations, government officials have also declared that Canada will not be a Boy Scout in government procurement policy.

The provinces also discriminate actively in favour of local suppliers. In most cases, the degree of local preference is a legislated price preference in favour of provincial or Canadian suppliers, and in many instances, the procurement preference is directed against imports from other provinces as well as foreign sources. Most provinces also require their Crown corporations, hospitals, and educational institutions to favour local producers.

It is commonly argued that restricting government purchases to domestic industries provides great benefits to both the industry favoured by government purchases and the national economy. However, the benefits to an industry characterized by rising costs and competitive market conditions are likely to be negligible. This is because the shift of government demand from imports to domestic products causes the domestic producer's price to rise. The increase in the domestic producers' price causes private-sector buyers to switch to imports, and the shift of private purchases to imports offsets the initial increase in the domestic producers' price, output, and employment. Consequently, procurement policies can be ineffective tools of protection in most competitive markets. Moreover, any gain to the domestic industry comes at a direct cost to the national economy in terms of inefficient production, resource misallocation, higher prices, higher taxes and/or government deficits, and, when operated at the provincial level, segmentation of the national market.⁵

The one case where public purchasing policies may lead to long-term economic benefits that outweigh the short-run costs is when the domestic market is too small for an industry characterized by large economies of scale. In such cases, the government might play the role of the initial

market which allows the domestic producer to capture the economies of scale, and hence reduce per unit costs in order to be competitive in domestic and foreign markets. However, the record of governments in this role has been mixed. Moreover, there is always the possibility that a government could be forced to purchase unwanted quantities of goods to maintain the required level of production.

The government market has been one of the fastest growing markets in the international economy. Canadian industries are major producers of goods and services increasingly sought after by foreign as well as Canadian governments. While the Procurement Code represents an important addition to the body of trade policy rules, exemptions to the code reduce its benefits to Canada significantly in terms of access to foreign government markets. It does not apply to foreign junior governments or quasi-governmental entities, and these governments and entities are frequently the major purchasers of communications equipment, mass transit equipment, electrical power generators, and electric transmission equipment.

Performance Requirements

The term “performance requirements” refers to commitments required of companies as a condition for new investment or receipt of an economic incentive. Such commitments can cover domestic sourcing and content, exports, world product mandates, R&D activity, and managerial activity. Most Canadian subsidy programs require certain related commitments from the subsidy recipient, and the assessment of a subsidy application and the determination of the subsidy amount include direct references to Canadian sourcing, content, export potential, and so forth. For example, the criteria for acceptance of export financing include the degree of Canadian participation in overseas projects, Canadian content in capital goods exports, and the types of jobs retained or created. As indicated in the previous section, the federal government seeks offsets from foreign-based multinationals in large or on-going defence and non-defence government contracts.

The federal government also operates a number of duty remission programs which allow companies to import goods duty free in exchange for meeting commitments on Canadian production and content. The enticement to firms to participate in such programs is their ability to extract a “subsidy” from consumers by charging a price similar to the duty-inclusive price charged by nonparticipating importers despite the fact that the participating firms do not pay the duty. The best known duty remission type of program is the Canada-U.S. Automotive Products Trade Agreement (APTA) which requires motor vehicle producers to meet certain production and content requirements in order to import duty-free automotive parts and finished motor vehicles. Other products

in which companies can take advantage of Canadian duty remission programs are power cruisers, front-end loaders, television parts and sets, and sewing machines.

Until recently, the most important policy instrument used by Canada to obtain performance requirements was the Foreign Investment Review Act. Under this act, the Foreign Investment Review Agency (FIRA) screened new investment and take-over investment by foreign-owned companies and judged the investment proposal on the basis of potential contribution of “significant benefits to Canada.” The FIRA criteria for evaluating “significant” benefits of foreign direct investment proposals are shown in Table 14-3, along with the performance requirements agreed to by Apple Inc. of California, in 1981, as an illustration of the undertakings that were sought. The federal government has recently introduced a new bill, the Investment Canada Bill, to replace the Foreign Investment Review Act. This new bill would eliminate the screening of most foreign new investment and take-over investment, and for those foreign investments that continue to be screened, it would reduce the benefit criteria from “significant” benefits to “net” benefits. As a result, this bill would significantly reduce the performance requirements on foreign firms investing in Canada.

TABLE 14-3 FIRA Criteria

– Compatibility with national industrial and economic policies
– New investment
– Increased employment
– Increased resource processing or use of Canadian products or services
– Canadian participation (as shareholders/directors/managers)
– Improved product variety and innovation
– Improved productivity and industrial efficiency
– Additional exports
– Beneficial impact on competition
– Enhanced technological development

The Honourable Herb Gray, then Minister of Industry, Trade and Commerce, announced that on September 21, 1981, Apple Inc. of California made the following undertakings prior to receiving FIRA approval of its investment application:

1. to make all officers, except the Chairman of the Board and the Secretary, and all management resident Canadians;
2. to limit appointments of nonresidents to one year or less;
3. to sell at least 80 percent of its product through independent Canadian retailers (unless market conditions require the use of company personnel to make direct sales);
4. to perform in Canada at least 80 percent of all repair and maintenance service for products manufactured by the applicant or the new business and sold in Canada;
5. to seek actively and recommend to customers Canadian sources of compatible peripherals and materials subject to availability in sufficient quantities;

6. to commence manufacturing in Canada, when sales justify establishment of a "module" employing approximately 100 people (anticipated within three years), and to review RPT progress toward this goal with the Department of Industry, Trade and Commerce twice a year;
7. to implement vigorously an existing agreement providing for the use of telidon interface kits (TIKs) dedicating Apple and its subsidiaries to the creation of a world market for TIKs.
8. to seek actively and develop Canadian sources for Canadian-made goods if competitively available (specifically power supply units and semi-conductor memories). ("For such purposes, complete information will be provided to Canadian suppliers regarding future worldwide requirements of the applicant, industry prices, and technology which the applicant is not restricted from communicating by previous agreements with third parties and which, in the judgment of the applicant, is required by such suppliers.");
9. to establish a corporate purchasing task force with the specific mandate of identifying and developing Canadian sources of supply for Apple's worldwide requirements;
10. to recommend to its worldwide dealers Canadian-made peripheral equipment, provided such products are competitive in price, performance and availability;
11. to ensure that at the end of the first year Canadian value-added (CVA) will not be less than 38 percent of the cost of goods sold in Canada, and thereafter to make best efforts to achieve the highest level of CVA in accordance with the schedule (not available because of FIRA's secrecy regulations) submitted to FIRA by the applicant;
12. to establish within one year a Canadian software research and development group; and
13. to make best efforts to initiate R&D projects related to hardware.

Source: Office of the U.S. Trade Representative, quoted in Morici, P., A.J.R. Smith and S. Lea, *Canadian Industrial Policy*, National Planning Association, Washington, 1982.

The impact of performance requirements on the structure, efficiency, and trade of an economy is difficult to assess. Clearly the Canadian automotive sector and the Canadian economy have benefitted immensely from the APTA, although this has been largely due to rationalization of production in Canada which was possible under a bilateral treaty that provides stable, predictable, duty-free trade with the United States. To the extent that performance requirements offset the non-competitive factors that influence investment decisions, they can contribute to a sounder structure and more efficient economy. Nevertheless, by requiring companies to source domestically or to export, performance requirements can induce the same types of economic costs to the economy as other trade-distorting practices do.

Performance requirements have become an important trade policy issue. The United States has long criticized the requirements under the APTA as well as the duty-remission program for Volkswagen, and in 1982, the United States requested a GATT panel to examine the domestic sourcing and export requirements imposed by FIRA. The GATT panel

ruled that while the export requirements were not inconsistent with the GATT, the domestic sourcing commitments were inconsistent. While many of the bilateral problems associated with the FIRA are likely to be largely resolved by the Investment Canada Bill, the United States has indicated to all of its trading partners that it will push for GATT negotiations to establish rules and limitations on the use of performance requirements. Such an initiative could pose a dilemma for Canadian policy makers. On the one hand, they are likely to be reluctant to limit the policy instruments available for industrial policy, while on the other hand, Canada has become an important direct foreign investor itself and Canadian investors are likely to favour multilateral rules that limit the type and scope of performance requirements in other countries.

Does Canada Protect More Than Others?

In addition to subsidies, government procurement, and performance requirements, Canada also provides protection to certain industries, such as the wine industry, by industry-specific NTBs. Nor is the use of non-tariff instruments that affect trade and attract international criticisms limited to the goods-producing sectors. The Bank Act sets out statutory limits on the participation of foreign banks in the domestic market and requires these banks to store and process their records in Canada. There are also numerous federal and provincial regulations and policies in the trucking, air travel, broadcasting, and financial services industries that affect trade flows. As in the case of the goods-producing sectors, the objectives and the instruments employed vary considerably. In certain cases, the policy objective is to retard foreign competition; in other cases, the policy reasons fall within the traditional regulatory objectives. Nevertheless, a growing number of disputes between Canada and its major trading partner, the United States, are over regulatory approaches and objectives, and government regulations and domestic policies in general are becoming increasingly important in trade policy relations.

Does Canada provide more non-tariff protection to its domestic industries than most other trading countries? On the whole, Canada does not appear to be more protectionist than most other major trading nations. Canada has employed various selective and sectoral NTBs when deemed necessary, but certainly no more so than any other major developed country. Canadian governments are more interventionist at the micro-economic level than U.S. governments, partly reflecting the course of Canadian social, economic, and political development and partly reflecting the real and perceived problems of a small open economy next door to a large economy. However, one important reason why Canada may look more protectionist relative to the United States is that both the specific instruments employed and their targets are much more visible.

On the other hand, Canada appears to be a much more open economy than Japan and most Western European countries.

Overall, Canada takes an ad hoc, case-by-case, industry-by-industry approach and employs those instruments thought most suited to the particular situation. It has been argued that Canada is replacing tariffs with non-tariff barriers, particularly subsidies, to regain the lost protection. Given the major problems in measuring and comparing the protective effects of the various NTBs and comparing them to tariffs, this is a difficult argument to resolve. Nevertheless, it would appear that, despite the growth in the amount of subsidies provided and the increased use of procurement policies, performance requirements and other NTBs, the overall level of protection provided by tariffs and NTBs in Canada has declined in the last 10-15 years. This is not to say that the protection provided to some industries has not increased. Clearly, the textile and clothing sector has benefitted from stronger trade restrictions, and other industries, for example the air and rail transportation equipment industries, have benefitted from large subsidies. The provinces have also become more active in supporting local industries and the federal government has expanded its assistance to exporters. However, it does appear that most industries receive less trade protection today than they did 10 to 15 years ago. Moreover, a significant number of the NTBs used by Canada in the last decade have been in response to foreign trade policy actions, as in the case of defensive subsidies for shipbuilding and subsidized export financing of capital goods exports. All of this suggests not only that Canadian governments publicly support an open liberalized trading system, but also that they have been relatively successful in resisting the growing political demands to insulate Canadian producers and workers from economic recession, increased foreign competition, and changes in the international economy.

Negotiating NTBs Internationally

Few countries are more dependent on trade and the international economy than Canada. Consequently, the tariff reductions and non-tariff barrier codes and understandings negotiated during the Tokyo Round are of critical importance to Canada. The reduction in foreign tariffs and the partial liberalization of foreign government markets offer potentially large benefits to Canadian producers. At the same time, the reduction of Canadian tariffs directly benefits Canadian consumers and promotes the development of efficient and competitive Canadian industries. Nevertheless, the GATT faces major challenges in future efforts to reduce and control NTBs and to reach agreement on the use of non-tariff measures that inadvertently distort international trade flows.

There are two fundamental concerns facing the GATT. How does one establish a set of criteria for determining what policies are consistent

with an open, liberal trading system? And how does one manage a system of trade policy rules and regulations when many of the trade protection instruments are hidden and difficult to police? The lack of predictability, stability, or transparency of many non-tariff barriers and their bilateral or sectoral application are threatening the basic principles of the GATT system. At the same time, when dealing with policies that are directed to domestic objectives, particularly structural adjustment policies, any negotiations on trade policy will have to take into account a whole new range of policy considerations.

In large part, the efforts of the last few years have been directed to elaborating rules and developing workable ways and means to limit and control the use of an ever growing range of policy instruments that directly affect trade. In the Tokyo Round negotiations, the process was largely devoted to establishing or expanding codes and procedures on the use of specific instruments (antidumping duties, subsidies and countervail duties, technical standards, import licensing, customs valuation, and government purchases) or devising rules of conduct for government policies in certain trade sectors (meat, dairy products, and civil aircraft). While the coverage, technicality, complexity, detail, and number of signatories vary in each case, the codes and understandings represent a major effort to regulate government policies that impede and distort international trade flows.

There are, however, problems that have been identified with the agreements and codes, including the shift to a more legalistic operation of the trade policy system and the further erosion of the most-favoured-nation and non-discrimination principles. Concerns have been raised over domestic implementing legislation in the United States and whether the actual outcome of the Tokyo Round negotiations was a shift to a new legalistic system of stand-by or contingency protectionism as opposed to trade liberalization.⁶ As shown during the November 1982 GATT ministerial meetings and in the on-going work at the GATT, there remains a great deal of unfinished business regarding the coverage and operation of these codes and understandings. The GATT also faces the major tasks of formulating a new safeguards code, negotiating the graduation of the newly industrialized countries to full status and responsibilities in the GATT, addressing the largely unresolved and contentious matters in agricultural trade policies, and expanding the work program to include trade in services, trade related investment (performance requirements), high technology trade, and structural adjustment. Canada's interest in the completion of these tasks lies in recognizing its dependence as a small, open, trade-dependent economy on the smooth operation of a set of multilateral codes which take into account, to the maximum extent possible, its own domestic policy priorities.

Appendix A

Defining and Measuring NTBs

In the broadest sense, a non-tariff barrier is a policy instrument other than a tariff that operates to distort the volume or composition of trade from the free trade volume or composition. Unfortunately, this is a weak operational definition, partly because of the growing difficulty of establishing what free trade is. The difficulty of defining and hence identifying and studying NTBS is further complicated by the diversity, unpredictability, and lack of transparency of policy instruments that distort trade. In many cases, the application of the instrument is discretionary, and it is this fact that underlies the growing concerns over the application of contingency measures to overtly distort trade under legislation dealing with “unfair” import competition. Numerous policy instruments, such as subsidies, are applied by individual companies (rather than by industry as a whole), and others, such as discriminatory technical standards, are found in domestic legislation, rather than in policy legislation, and operate not at the border but within the domestic economic environment. Nor is the operation of every trade-distorting policy instrument explicitly set out under legislation; for example, Canada’s federal procurement rules operate through administrative guidelines and practices. The problems of dealing with NTBs are further complicated by the fact that in a federal country like Canada, numerous NTBs are applied at the provincial or state level.

Initially, NTBs and other measures thought to affect trade flows were grouped according to their function, as shown in the first two columns of Table 14-A1. Walter (1969), however, has suggested a classification system based on the intent of a policy instrument — a system designed to be both operationally useful and consistent with the standard theory of trade restriction. He defines three types of government practices based on intent:

- *Type 1.* Measures designed primarily to protect domestic industry from import competition or to strengthen domestic industry in competing with imports or competing for export markets.
- *Type 2.* Trade-distorting policies and practices which are imposed primarily with the intent of dealing with non-trade related problems, but which are periodically and intentionally employed for trade-restrictive purposes.
- *Type 3.* Policies and practices applied exclusively for non-trade related reasons but which unavoidably serve to distort international competitive conditions.

TABLE 14-A1 Classification of Government Practices Cited as Non-Tariff Barriers

Major groupings	Type by function	Type by intent ^a
1. Government participation in trade	a) Production subsidies	II
	b) Capital subsidies	II
	c) Export subsidies including subsidized export financing	I
	d) Discriminatory government procurement practices	I
	e) State trading	I
	f) Tied aid	I
	g) Exchange rate restrictions	II
	h) Government entrepreneurship	III
	i) Government financing	II
	j) Government sponsored subsidized R&D	II
	k) Government defence programs	III
2. Standards	a) Variation in health standards and requirements on products	II
	b) Variation in health standards and requirements governing production of goods	II
	c) Variation in packaging and labelling standards	II
	d) Marketing regulations	II
	e) Variation in weights and measures	II
	f) Import labelling requirements	I
3. Specific limitations primarily affecting quantities	a) Quotas and other quantitative restraints	I
	b) Bilateral agreements	I
	c) Performance requirements for domestic sourcing or exporting	I
	d) Buy-domestic campaigns	I
4. Specific limitations operating through price mechanism	a) Variable levies	I
	b) Minimum import prices	I
	c) Duty remission programs	I
	d) Supplementary import charges	I
	e) Antidumping and countervail duties	I
5. Taxation system	a) Non-neutral border tax adjustments	I
	b) Variation in indirect and direct taxation	III
	c) Variation in depreciation method	III
	d) Different taxation of export industries	I
	e) Tax credits and rebates	III
6. Customs and administrative entry	a) Customs valuation	II
	b) Customs classification	II
	c) Differences in customs valuation systems	I

Note: These are measures and regulations that have been reported by GATT signatories as NTBs.

a. In many cases, it is the actual legislation or administrative procedure that determines whether the indicated measure is used as a non-tariff barrier in any given country.

This classification system is applied in the third column of Table 14-A1. As a basic working definition, NTBs are those policy measures that artificially manipulate the relative competitiveness of domestic and foreign suppliers in a given market with the explicit intention of improving the competitive position and hence increasing the level of output and income of the domestic producer above that allowed by free trade. In general, such practices involve the legislative or administrative segregation of two sources of supply, domestic and foreign, to permit discrimination in favour of the domestic suppliers. At the same time, the term “non-tariff measures” has been developed in trade policy discussions to refer to policies that are not intended to affect trade flows but that inadvertently do so, as opposed to NTBs, which are explicitly intended to protect domestic industries from foreign competition.

To deal with the problem of estimating the protective effect of various types of policy measures, the concept of a tariff equivalent has been developed. This concept was developed theoretically in the analysis of the impact of quotas, and equivalence was originally stated “in the sense that a tariff rate would produce an identical discrepancy between foreign and domestic prices” (Bhagwati, 1965). As the literature on the equivalence of tariffs and quotas shows, however, equivalence only occurs when there is perfect competition in both the import and domestic markets.

A further problem in measuring non-tariff barriers is that different types of instruments have different effects on prices, quantities, and resource allocation. For example, a quota affects both the producer price and the consumer price, while a subsidy only affects the producer price, and both instruments have different impacts on imported quantities. These differences have led to the practice of subdividing non-tariff barriers into two groups: those that simultaneously affect consumer and producer prices, and subsidy-type instruments which only affect producer prices. The differences in economic impact are not, however, solely limited to prices and quantities. A capital subsidy, as opposed to a general production subsidy, affects not only the level of domestic production but also the relative use of capital, labour, and other factors of production.

In addition to these theoretical problems, there are the practical difficulties of collecting institutional information on the operation of the non-tariff barriers, identifying the industries that receive protective support, and assembling quantitative data on the policy instruments and market characteristics. Even when reasonable estimates of tariff or subsidy equivalents can be obtained, they are usually specific to the year studied and sensitive to the industry and market data employed.

Appendix B

Changes in the Customs Valuation System

When tariff rates are given on an *ad valorem* basis, the method for determining the value for duty can be a major instrument of trade protection. The Canadian valuation system before 1985, the Fair Market Value system, differed substantially from the systems employed in other countries. Fair Market Value (FMV) was defined as the price at which like goods were sold at arm's length at the same level of trade and quantity in the domestic market of the exporting country. The Canadian system also included provisions for determining the value for duty of non-arm's length transactions. This was an important element of the valuation system, since a large share of Canada's imports are transactions between related companies.

A second important feature of the Fair Market Value system was the set of rules and procedures for determining the value for duty (VFD) when the FMV could not be determined because "like" goods were not sold in the country of export in the circumstances required to determine the FMV. The Customs Act allowed the Minister of National Revenue to prescribe a VFD when he was "of the opinion that by reason of unusual circumstances" the usual procedures were impractical, or when sufficient information was not furnished or was unavailable to enable a determination of the FMV.

While the large majority of arm's length imports were valued at their actual transaction costs under the Fair Market Value system, VFD rulings were not uncommon. Furthermore, ministerial prescriptions were heavily used for imports of most clothing from Hong Kong, South Korea, and Taiwan, and for footwear from Italy, Brazil, Spain, and Taiwan. There were numerous foreign complaints that the FMV system was arbitrary and uneven in application, and it would appear that the intent was to raise the degree of protection provided by the tariff through these prescriptions.

As a result of negotiations at the Tokyo Round, Canada is required to change its valuation system in 1985 to the "transaction value" system. Under the negotiated Agreement on Customs Valuation, the general principle has been established that the value for duty should be the actual value of the imported goods, and that the normal way of establishing the actual value should be the transaction price stipulated in the import invoice. These principles apply equally to arm's length and non-arm's length transactions. Canada signed the valuation agreement on the condition that it would not have to implement the system until 1985. Canada also reserved the right to enter negotiations to adjust tariff rates to recover the reductions in protection arising from the changes from the Fair Market Value system to the transaction system.

In 1983, the Tariff Board report identified a large number of possible tariff rate adjustments. Most would have involved a change of 0.1 to 0.5 percent in existing tariff rates across a wide range of tariff classes. However, some were large, ranging from an increase of 1.1 percent for motorcycles to 5.2 percent on certain types of printed advertising material. More important, the Tariff Board also suggested that a number of new tariff items be created in order to accommodate tariff rate changes. This was because most VFD rulings have been imposed on products that take up only part of a tariff item or on imports from selected countries. Within these recommended new tariff items, the recommended tariff adjustments were quite significant. The Tariff Board also examined what tariff adjustments would be required to incorporate the existing ministerial prescriptions and recommended a number of country-specific tariff rate adjustments in certain clothing, textile, and leather tariff items for imports from Hong Kong, Italy, Spain, South Korea, and Taiwan. In the November Economic Statement by the Minister of Finance, the federal government listed those tariff rates it has decided to change in order to switch to the new valuation system. The changes are not as widespread or as large as those recommended by the Tariff Board.

Notes

An early version of this paper was presented at the Symposium on Non-Tariff Barriers and the GATT held by the Royal Commission on the Economic Union and Development Prospects for Canada on December 2, 1983. This revision was prepared in December 1984. The discussion and empirical evidence in the paper are based on work underway at the Institute for Research on Public Policy on non-tariff barriers and their protective effect in Canada. The author is grateful for the comments and criticisms of the symposium participants and those of his colleagues, John Curtis, Roman Lepiesza, Frank Stone, and Gerry Salembier, at the Institute. None of these individuals can be held responsible for any errors or omissions.

1. One major problem confronting trade policy analysis and negotiation is that of determining when a policy action is an NTB as opposed to a non-tariff measure that inadvertently affects trade flows. A definition of NTBs is given in Appendix A, along with a brief discussion of the conceptual and empirical problems that occur in identifying them and explaining their protective effects.
2. The problems of dumping into a third market because of export diversion caused by a defensive trade policy action by one trading partner against the exporter is part of a wider problem of international policy interdependence. This interdependence poses major problems for Canada because of its smallness, openness, and dependence on trade. For instance, Canada provides subsidized export financing for capital good exports primarily to offset similar subsidized financing by other major capital goods exporters.
3. Conditional indirect subsidy programs operate as inter-industry transfers where the grant paid to one industry — the recipient industry — is transferred to a second specifically designated industry — the beneficiary industry — through the price of an intermediate input. The beneficiary industry can be either the input producer or the input user. For instance, when an input producer receives a grant to subsidize exclusively the production of the input for a designated user, then the user industry is the beneficiary industry. Alternatively, if an input user receives a grant to purchase the input from one source (i.e., a domestic source) and not a second source (i.e., a foreign

source), then the input producer is the beneficiary industry. A conditional indirect subsidy may also be provided to an input producer or an input user through a current subsidy received by a third industry. For example, the transportation industry may receive a grant to reduce the cost of shipping a specific input from the producer to the purchaser. In such cases, the current subsidy may be captured by either the input user or the input producer.

4. The Canada-U.S. Automotive Products Trade Agreement (APTA), signed in 1965, eliminated the Canadian tariff on imports of automotive products only for those companies producing motor vehicles. By doing so, it enabled the motor vehicle producers to continue to charge a price higher than either that of vehicles imported from the United States or of those produced in the rationalized plants in Canada. Canadian prices continued to remain significantly higher than U.S. prices until the mid-1970s, and it has been argued that the higher profits from Canadian sales were used to finance the costs of restructuring the domestic industry and to subsidize exports of Canadian-produced parts and vehicles. Since the mid-1970s, Canadian prices and U.S. prices, once adjusted for the exchange rate, have not been significantly different. For further discussion, see Beigie (1970) and Moroz (forthcoming).
5. For detailed discussion of the economics of government procurement policies, see Lowinger (1976) and Richardson (1972).
6. For an in-depth discussion of contingency protectionism, see Grey (1982).

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Issues in Canadian Agricultural Trade Policy

THORALD K. WARLEY

The agricultural trade policies of all the industrialized countries are an integral component of their national agricultural and food policies. In turn, the farm and food policies of these countries can be regarded as sector-specific industrial strategies. The involvement of the state in the sector is animated by such considerations as: maintaining a secure food supply (predominantly produced from national resources); assuring market stability; influencing output mixes, industry structures, and factor returns; ameliorating the pace of adjustment; and promoting sectoral development. The instruments of state policy that are used within national borders include subsidies on products and inputs, tax expenditures, and the suspension of competition norms. Frontier arrangements are an adjunct of internal support mechanisms. Agricultural and food imports are controlled by formal and conditional tariffs, fixed and discretionary quantitative restrictions, procurement and licensing policies of state trading agencies, and myriad technical standards, valuation and documentation procedures, and health and sanitary regulations. Exports are assisted by direct subsidies, cheap credit, surplus disposal programs, and state-funded foreign market development schemes.

Repeated attempts to influence this situation in successive rounds of negotiations conducted under the General Agreement on Tariffs and Trade (GATT) have essentially failed. The core principles and obligations of the GATT — protection by bound tariffs, non-discrimination, observance of the code of fair trade conduct, a commitment to progressive liberalization, and an obligation to avoid damage and impairment to the trade interests of other countries — have never really applied to agricultural trade (Warley, 1976; Warley and Surry, 1983). As a result, world trade in farm products is characterized by subsidization of high-cost

production, restricted market access for low-cost suppliers, exacerbated world market instability, and lawlessness in the conduct of international exchanges. And there has been a tendency for the situation to deteriorate further as government interventions in the agricultural sector have increased and as countries have been forced to take defensive measures to counter the trade-distorting practices of others.

Canada's Agricultural and Food Trade Policies

By contemporary international standards, Canada has a creditable record of supporting efforts in the GATT and elsewhere to improve the conditions of world agricultural production and trade. That is, it has sought to secure improved and assured access for low-cost suppliers; favoured measures that would reduce the incidence of unfair competitive trade practices through clarification of the GATT's provisions and the amplification of codes; joined in international commodity agreements and arrangements that promised to enhance market stability and share more widely the burdens of adjusting production and consumption to changing market conditions; and supported efforts to extend the domain and the authority of the GATT by strengthening its rules, disciplines, and consultative and dispute settlement procedures. This is to be expected of a country with a large endowment of agricultural resources relative to its population, comparative advantage in the production of a wide range of agricultural products, a limited ability to match the subsidies to production and export of larger competitors, an agricultural industry that exports about 35 percent of its output and a large positive balance in its agricultural trade (Table 15-1). Furthermore, the domestic market has only a limited potential for expansion and there are severe limits on the ability of governments to effect further income transfers to farmers from Canadian consumers and taxpayers. Expanding foreign sales of farm and food products is, therefore, the only feasible way of maintaining and increasing the incomes and asset values of Canadian farmers.

Canada also has, however, a highly interventionist policy toward the agrifood sector, the provisions of which influence the international agricultural trade system by affecting national output and consumption and thence net export availabilities or net import requirements.

Many of the programs administered by the federal and provincial departments of agriculture enhance productivity and promote competitiveness or are concerned with providing public goods and correcting for market failures. The trade effects of such programs (research and extension, product and market development, protection of the resource base, maintaining plant and animal health, and so on) are generally incidental, and they are not controversial internationally. Other components of agrifood policy, however, have protectionist, preservationist, and adjustment-ameliorating objectives and results. Programs of this nature usu-

TABLE 15-1 Net Trade In Agricultural Products, Canada, 1972-83

Commodity 1983	Average 1972-1976	1977	1978	1979	1980	1981	1982	1983
					millions of dollars			
Grain	1,889	2,187	2,301	2,649	4,227	4,648	5,220	5,535
Grain products	102	134	111	108	103	175	57	62
Animal feeds	53	94	81	114	126	135	136	174
Oilseeds	210	294	390	687	446	559	450	520
Oilseed products	-113	-125	-149	-159	-65	-61	-85	-157
Animals, live	13	105	139	176	141	31	194	214
Meats	-50	-73	-22	96	227	319	479	376
Other animal products	18	59	31	76	101	50	126	59
Dairy products	4	28	15	41	72	115	184	137
Poultry and eggs	-14	-32	-32	-48	-11	-17	-33	-38
Fruits and nuts	-409	-606	-751	-897	-928	-1,055	-1,126	-1,126
Vegetables (excl. potatoes)	-169	-275	-336	-364	-309	-393	-410	-415
Potatoes and products	3	-4	-6	10	26	21	55	44
Seeds	2	-4	-9	-20	-19	-32	-17	-3
Maple products	7	10	11	15	15	18	19	21
Sugar	-283	-189	-165	-200	-532	-434	-221	-187
Tobacco	55	55	89	129	39	123	108	79
Vegetable fibres	-66	-79	-87	-108	-125	-128	-63	-89
Plantation crops	-265	-658	-708	-769	-783	-716	-633	-668
Other agricultural products	-102	-153	-175	-171	-162	-196	-203	-217
Total agricultural products	885	768	728	1,365	2,589	3,162	4,247	4,320

Source: Adapted from Agriculture Canada, *Trade in Agricultural Products 1979-81*, Ottawa, September 1982, and *Canada's Trade in Agricultural Products 1981, 1982 and 1983*, Ottawa, October 1984.

TABLE 15-2 Federal and Provincial Budgetary Expenditures on Agriculture, Canada

	Federal		Provincial		Total	
	1980/81	1981/82	1980/81	1981/82	1980/81	1981/82
Administrative	172.3	154.5	79.3	88.4	251.6	242.9
Research & advisory						
a) research	88.1	118.7	41.2	44.7	129.3	163.4
b) advisory	26.0	29.3	106.7	120.7	132.7	150.0
Inspection, pest & disease control	100.9	112.1	n.a.	n.a.	100.9	112.1
Rationalization						
a) rationalization of production	162.2	98.0	5.5	6.7	167.7	103.5
b) structural reorganization & improvements	20.1	18.6	97.4	86.0	117.5	104.6
Processing & marketing	33.9	35.8	350.9	361.6	384.8	397.4
Price & income support ^a	954.5	1,153.7	275.9	431.0	1,230.4	1,584.7
Technical and food aid	212.0	263.0	—	—	212.0	263.0
Totals	1,770.8	1,983.6	957.9	1,139.1	2,726.9	3,121.6
Expenditures on price & income support						
as % gross farm cash receipts ^b	6	6	2	2	2	8
as % net farm income ^b	30	24	9	9	39	33

Source: Data provided by Agriculture Canada.

a. Major items include dairy subsidy, stabilization payments, crop insurance, and transport and credit subsidies. Implicit railway subsidies to producers and tax expenditures are excluded.

b. Fiscal 1980–81 and 1981–82 expenditures as a proportion of calendar 1980 and 1981 receipts and incomes.

TABLE 15-3 Major Commodity-Specific Policy Instruments Affecting Output, Consumption, and Trade, Canada, 1984

	Wheat	Barley	Corn	Soybeans	Canola products	Cattle	Hogs	Beef and veal	Pork	Sheep meat	Chicken	Turkey	Eggs	Fluid milk	Industrial milk	Butter	Cheese	Powdered milk	Sugar	Potatoes	Fruits and vegetables	Tobacco	Grapes/wine
Product support																							
Price & margin support																							
Full cost pricing																							
Floor pricing																							
Margin support																							
Two prices	*	*	*	*	*	*	*		*		*	*	*	*	*	*	*	*	*	*	*	*	*
Supply control	*									*	*	*	*	*	*	*						*	
Trade controls																							
Tariffs	*	*	*					*	*		*	*	*			*	*	*	*	*	*	*	*
Quotas	*							*	*		*	*	*			*	*	*	*	*	*	*	*
Licensing	*	*	*			*	*	*	*		*	*	*			*	*	*	*	*	*	*	*
State trading	*	*	*			*	*	*	*		*	*	*			*	*	*	*	*	*	*	*
Export subsidies	*	*	*			*	*	*	*		*	*	*			*	*	*	*	*	*	*	*
Food aid	*																						
Input subsidies																							
Transport	*	*	*		*																		
Storage																							
Crop insurance	*	*	*	*	*															*	*	*	*

TABLE 15-4 Effective Rate of Producer Protection, Canadian Agriculture, 1971-80 (unadjusted)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
	(\$ millions, current)									
Farm cash receipts										
domestic prices	4,511	5,510	6,968	9,011	10,057	10,088	10,212	12,040	14,283	15,665
border prices	4,067	5,047	6,430	8,129	8,819	8,680	8,768	10,694	12,720	13,963
Farm value exports	1,598	1,723	2,147	3,164	3,230	3,231	3,410	3,815	4,798	6,302
Total purchased inputs										
domestic prices	2,594	2,852	3,464	4,305	4,921	5,578	5,922	6,917	8,159	9,336
border prices	2,501	2,705	3,274	4,073	4,661	5,368	5,702	6,643	7,823	8,956
Imported input cost	455	488	570	704	837	1,004	1,077	1,237	1,447	1,658
Gov't and other input cost ^c	532	568	588	808	873	961	1,324	1,063	1,100	1,270
Export Value Adjustment	112	121	150	221	226	226	239	267	336	441
Imported input cost adjustment	32	34	40	49	58	70	75	86	101	116

Value-added										
domestic prices	1,947	2,658	3,504	4,706	5,136	4,510	4,290	5,123	6,124	6,329
border prices ^a	1,114	1,861	2,678	3,420	3,453	2,507	1,906	3,169	4,032	4,062
Effective Rate ^b	29	16	13	21	29	47	70	34	29	30
Protection ^c	43	24	18	28	39	64	94	49	44	48
(unadjusted) ^d	75	43	31	38	49	80	125	62	52	56
										Ave. 61%

Source: R.G. Latimore, "Canadian Agricultural Trade Policy: Commercial Market Relations and Effects on the Level and Stability of World Prices," paper prepared for a workshop of the U.S.-Canada International Agricultural Trade Research Consortium, Airlie House, Virginia, December 1982, Table B.5.

- Value-added adjusted for tariffs, NTBs, direct government program payments and government contributions to crop insurance, producer financing, and government and railway contributions to grain and oilseed transportation, with further adjustments for structural over/under valuations of the exchange rate. No adjustments have been made for restrictions on output of milk, feather products, or tobacco, or on deliveries of grains and oilseeds, and no terms-of-trade effect is included.
- Includes only federal and provincial commodity program expenditures.
- Includes expenditures under commodity programs, federal crop insurance, federal producer financing, federal trade promotion, and federal contributions to grain transportation.
- Includes expenditures under commodity programs, federal crop insurance, federal producer financing, federal trade promotion, and federal contributions to grain transportation plus railway contribution to grain transportation (the "Crow Gap").

ally involve the transfer of income to farmers. They do result in distortions in international agricultural production and trade and they are the source of the intergovernmental disputes on agricultural matters that are such a prominent feature of international economic relations.

Table 15-2 gives details of the direct expenditures of federal and provincial governments on agricultural programs for the two most recent years for which data are available. The price and income support expenditures are the items that are most clearly associated with trade distortions and controversies. However, agricultural production and trade are also distorted by market control programs, frontier measures, and tax expenditures that do not appear in government budgets.

Table 15-3 shows the instruments of policy that affect resource returns, output, consumption, and trade in the major commodity sub-systems in Canadian agriculture. It is not possible to identify the incidence on specific commodity production and trade systems of such public policies as subsidized credit, tax expenditures, and a miscellany of technical trade barriers. These are therefore not included in the matrix. It should be emphasized, however, that these measures together have a very large impact on the competitive position of Canadian producers in the Canadian and international markets.

A number of studies have been made of the trade effects of Canada's agricultural policies and programs (FAO, 1974; Latimore, 1974, 1982; Soe-Lin, 1980; Josling, 1981; Barichello, 1982; Harling and Thompson, 1983). Table 15-4 reproduces Latimore's estimates of the degree of effective protection accorded to Canadian agriculture in the 1970s (Latimore, 1982). It may be seen that the level of effective protection varied between years but averaged 61 percent during the decade when all support (except tax expenditures) is counted. Others have calculated several measures of the extent of protection for selected commodities in various time periods. Latimore's summary of these results is reproduced in Table 15-5. Although they are as yet unpublished, studies by the OECD Secretariat of the producer subsidy and consumer tax equivalents of product-specific policies in Canada for the period 1977-81 also show that the dairy and poultry industries are the most highly protected and assisted parts of Canadian agriculture.

Several authors have estimated the income transfers and efficiency losses associated with government intervention in Canadian agriculture. Their results are summarized in Table 15-6. It may be seen that Barichello — whose work is of exceptional scope and interest — estimates that the total gain in 1980 to the producers of the six commodities he examined was \$1,893 million. The combined annual cost to consumers and taxpayers was \$1,946 million and the efficiency loss to society was \$249 million.

Latimore's work led him to conclude that the effect of Canada's abandonment of its internal agricultural support policies and associated frontier protection measures would have reduced Canada's 1980 positive agricultural trade balance of \$2.6 billion by 40 to 60 percent (Table 15-7).

Other authors' estimates of the net import-expanding or export-reducing effects, in volume terms, of unilaterally withdrawing support for particular commodities are summarized in Table 15-8. For a variety of reasons discussed elsewhere (Warley, 1985), these estimates should be treated with caution, and it should be noted that the unpublished estimates by the OECD Secretariat of the effects of withdrawing support for Canadian agriculture in a multicommodity and multicountry framework point to more modest changes in Canada's agricultural commodity trade balances than those shown in Table 15-8.

Drawing the above and other material together, the Canadian agricultural support and food trade policies that have or might be thought to have major effects on Canada's position in the international agricultural trading system have results that can be summarized as follows.

- Embargoing imports of fluid milk, subsidizing the production of industrial milk, restricting imports of butter and cheese, and dumping surplus skim milk powder abroad together result in Canada's being a significant net exporter of dairy products rather than a substantial net importer.
- The Crow's Nest rate subsidy on Prairie grains (and some other products) moving by rail to export positions results in more grain being produced for export than would occur under compensatory freight rates.
- Segments of the Canadian horticultural industry, the tobacco industry, and some agricultural processing activities are provided with significant effective protection from U.S. and other suppliers by tariffs (Tables 15-9 and 15-10).
- The discriminatory procurement and margin policies of provincial liquor monopolies provide considerable support to Canadian grape growers and wineries.
- There is uncertainty about the trade effects of federal agricultural stabilization programs (the Agricultural Stabilization Act, the Western Grains Stabilization Act, the Agricultural Products Board Act), provincial commodity stabilization programs, federal and provincial tax expenditures on agriculture, and capital grants and credit subsidies provided to agricultural production and processing in Canada. However, since these programs all influence incentives and returns in Canadian agriculture, they are unlikely to be trade-neutral.
- The counter-cyclical import controls on bovine meats fulfill an important stabilizing function without materially restricting trade.

TABLE 15-5 Measures of Protection in Canadian Agriculture

Study	Periods	Wheat	Barley	Canola	Flax- seed	Corn	Soy- beans
<i>"Montant de Soutien" (%)</i>							
FAO	1968-70 average	2.2	10.7			4.3	
<i>Nominal Rate of Protection (%)</i>							
Harling & Thompson	1975-77 average	0	0				
Soe-Lin	1978	3.0	3.0	0	0	3.0	0
<i>Effective Rate of Protection (%)</i>							
Harling & Thompson	1975-77 average	40.4	66.9				
Soe-Lin	1978	13.0-15.0	12.0-14.0	3.0	7.0-8.0	9.0-10.0	1.0
<i>Producer Subsidy Equivalent (%)</i>							
FAO	1968-70 average	8.0	11.0			6.0	
Latimore	1974	4.0	4.0			2.0	
Josling	1976-78 average	16.4					
<i>Consumer Tax Equivalent (%)</i>							
FAO	1968-70 average	8.0	4.0			6.0	
Latimore	1974	-30.0	1.0			4.0	
Josling	1974-78 average	-22.0					

Source: R.G. Latimore, "Canadian Agricultural Trade Policy: Commercial Market Relations and Effects on the Level and Stability of World Prices," paper presented for a workshop of the U.S.-Canada International Agricultural Trade Research Consortium, Airlie House, Virginia, December 1982, Table 4.1

Potatoes	Beef	Pork	Poultry	Eggs	Sugar	Milk	Apples
					68.2	268.0	
2.0	3.1	0.8	42.0	36.3			
7.0	3.0	0.8	6.0			31.0–77.0	0
11.4	28.4	2.5					
16.0–20.0	3.0–8.0	– 3.0	27.0–38.0	24.0–31.0		68.0–215.0	1.0
					26.0	79.0	
					3.0	48.0	
					7.6	62.3	
					3.0	78.0	
					–3.0	23.0	
					15.0	45.0	

TABLE 15-6 Economic Transfers and Costs of Economic Intervention, Selected Commodities, Canada

Study	Year	Wheat	Barley	Canola	Milk	Beef	Pork	Poultry	Eggs
						(millions of dollars)			
Change in producer surplus	Josling	1978	323		904				
	Harling & Thompson	1976	307	127		76	5	166	90
	Barichello	1980	470	246	70	995		57	55
Change in consumer surplus plus taxpayer cost	Josling	1978	202		-623 ^a				
	Harling & Thompson	1976	95	0		-76	-6	-216	-100
	Barichello	1980	-307	-160	-49	-1,283		-73	-74
Deadweight loss	Josling	1978	-9		-275				
	Harling & Thompson	1976	-5	-5		-2	neg	-25	-8
	Barichello	1980	neg	-3	neg	-214		-13	-19
Loss/\$ transferred to producers	Josling	1978	0.03		0.30				
	Harling & Thompson	1976	neg	0.04		0.03	neg	0.15	0.09
	Barichello	1980	neg	0.01	neg	0.22		0.24	0.35

Source: T. Josling, "Intervention and Regulation in Canadian Agriculture: A Comparison of Costs and Benefits among Sectors," Technical Report E/14 (Ottawa: Economic Council of Canada, 1981); K.F. Harling and R.L. Thompson, "The Economic Effects of Intervention in Canadian Agriculture," *Canadian Journal of Agricultural Economics* 31(2); and R.R. Barichello, "Government Policies in Support of Canadian Agriculture: Their Costs," paper prepared for a workshop of the U.S.-Canada International Agricultural Trade Research Consortium, Airlie House, Virginia, December 1982.

a. Change in consumer surplus only.

TABLE 15-7 Effect on Agricultural Trade Balance of Abandoning Support to Agriculture, Canada, 1980

Scenario	Adjusted ^b effective protection rate	Net agricultural trade balance			
		Excluding terms-of-trade effect		Including terms-of-trade effect ^a	
		Low elasticity ^c	High elasticity ^d	Low elasticity ^c	High elasticity ^d
	(percent)	(billions of dollars)			
A	15	1.5	0.6	2.0	1.8
B	30	0.9	-0.9	1.8	1.1
C	37	0.7	-1.0	1.6	1.0
Actual 1980				2.6	

Source: R.G. Latimore, "Canadian Agricultural Trade Policy: Commercial Market Relations and Effects on the Level and Stability of World Prices," paper prepared for a workshop of the U.S.-Canada International Agricultural Trade Research Consortium, Airlie House, Virginia, December 1982, Tables 4.2 and 4.4.

- a. International price elasticity of demand of - 5.0 for net trade in agricultural production from Canada.
- b. ERP shown for 1980 adjusted for the effects of quota restrictions on output or marketing in milk, eggs, poultry meats, tobacco, grains, and oilseeds.
- c. Aggregate supply elasticity 0.2, demand elasticity - 0.25.
- d. Aggregate supply elasticity 0.5, demand elasticity - 0.25.

TABLE 15-8 Net Trade Effects of Abandoning Support to Agriculture, Selected Commodities, Canada

Study	Period	Wheat	Barley	Corn	Industrial				Eggs	Sugar
					Canola	milk	Beef	Poultry		
					(million metric tonnes)					
FAO	1968-70	-0.59	-0.54	+0.15		+3.22				+1.02
Josling ^a	1976-78	-0.70				+2.50				+0.55
Harling ^b & Thompson	1975-77	-1.00	-1.39				+0.06	+0.12	+0.05	
Barichello	1979-81 average	-0.90	-0.80		-0.06	+1.39	0	0		

Source: Food and Agricultural Organization, *Agricultural Protection: Domestic Policy and International Trade*, CCP/74127/3 (Rome: FAO, 1974); T. Josling, "Intervention and Regulation in Canadian Agriculture: A Comparison of Costs and Benefits among Sectors," Technical Report E/14 (Ottawa: Economic Council of Canada, 1981); K.F. Harling and R.L. Thompson, "The Economic Effects of Intervention in Canadian Agriculture," *Canadian Journal of Agricultural Economics* 3(2); and R.R. Barichello, "Government Policies in Support of Canadian Agriculture: Their costs," paper prepared for a workshop of the U.S.-Canada International Agricultural Trade Research Consortium, Airlie House, Virginia, December 1982.

+ implies increase in imports, - implies decrease in exports.

a. Estimates derived for medium elasticities.

b. Average of range for large and small elasticities.

TABLE 15-9 Tariff for Selected Agricultural Products, Canada, 1980

Product	Tariff rate^a
Wheat	12 cts./bushel
Wheat flour	50 cts./barrel
Barley	7.2 cts./bushel reducing to 5.0 in 1987
Biscuits	7.5% reducing to 5% in 1987
Soybeans, peanuts, mustard, rape and sunflower seed	Free
Oilcakes and oilcake meal	Free
Most vegetable oils (crude or degummed)	10% reducing to 7.5% in 1987
Cattle (live) except breeding stock	1.3 cts./lb. reducing to 1.0 ct. in 1987
Fresh, chilled, frozen beef	2.5 cts./lb. reducing to 2.0 cts. in 1981
Canned beef, canned ham, canned pork	15%
Pork	Free
Bacon, etc.	1.0 ct./lb.
Fresh, chilled, frozen lamb	5.6 cts./lb. reducing to 3.0 cts. in 1987
Chicken, ducks, turkeys (eviscerated)	12.5% but not less than 5 cts./lb. or more than 10 cts./lb.
Powdered milk	3.5 cts./lb.
Butter	12.0 cts./lb.
Cheddar cheese	3.0 cts./lb.
Condensed or evaporated milk	3.5 cts./lb.
Sweet cherries	3 cts./lb. but not less than 10% or free (seasonal duty, 8 weeks maximum)
Peaches	3 cts./lb. but not less than 12.5% or free (seasonal duty, 14 weeks maximum)

TABLE 15-9 (*continued*)

Product	Tariff rate ^a
Wheat	12 cts./bushel
Pears	1.5 cts./lb. but not less than 12.5% or free (seasonal duty, 24 weeks maximum)
Canned fruits	Varying from free to 15%
Asparagus (fresh)	5.5. cts./lb. but not less than 15% or free (seasonal duty, 8 weeks maximum)
Asparagus (frozen)	22.5%
Carrots (fresh)	0.5 cts./lb., or free (seasonal duty, 2 periods, 40 weeks maximum)
Potatoes (table and seed)	37.2 cts./100 lb. reducing to 35.0 cts. in 1987
Tomatoes	2.5 cts./lb. but not less than 15% or free (seasonal duty, 2 periods, 32 weeks maximum)
Canned and dried vegetables	Ranging from 22.5% to free
Unrefined sugar	\$1.00/100 lb.
Tobacco (unstemmed)	19.09 cts./lb. reducing to 12.75 in 1987
Tobacco (stemmed)	28.8 cts./lb. reducing to 20.00 in 1987

Source: Canada, Department of Finance, Customs Tariff (Ottawa: Department of Finance, annual).

a. All rates quoted refer to Most Favoured Nation. Base rates are those prevailing in 1980 after implementation of some of the reductions negotiated in the GATT.

- Paradoxically, while the producers of eggs and poultry meats in Canada benefit from high levels of effective protection and huge income transfers, the national formula pricing and supply management programs for these products have had minor trade-distorting effects.
- The state trading and import licensing operations of the Canadian Wheat Board and the activities of provincial agricultural marketing boards are also thought to have negligible effects on the direction, volume, and terms of Canada's external agricultural trade.

TABLE 15-10 Ad Valorem Tariff Values: Selected Commodities, Canada, 1980–81

	1980	1981	1982
Corn	2.1	1.8	2.0
Vegetable oil (crude or crude degummed)	10.0	10.0	10.0
Vegetable oil (other than crude or crude degummed)	17.5	17.5	17.5
Live cattle	1.6	1.4	1.3
Sheep	1.8	1.3	1.5
Beef and veal	2.0	1.3	1.0
Pork (cured)	0.9	0.9	0.8
Lamb and mutton	4.4	3.9	3.2
Live poultry	6.3	5.6	5.8
Chicken and turkey	12.5	12.5	12.5
Shell eggs	2.6	4.1	4.3
Butter	10.7	20.0	14.0
Alfalfa meal or seed	15.0	10.0	10.0
Potatoes, table	3.6	2.9	3.1
Tobacco, unstemmed	7.3	8.7	8.7
Sugar, unrefined (95°–96°)	3.8	4.1	8.6

Source: Data provided by Agriculture Canada.

Note: Ad valorem tariff equivalents were calculated by expressing the specific tariff as a percentage of the unit import price.

The Provinces and Agricultural Trade Policy

Ostensibly, there might be considerable scope for conflicts between provincial and federal governments on agricultural trade policy matters. All provinces have agricultural and food industry development strategies (including encouraging higher levels of provincial self-sufficiency and further processing beyond the production stage); they are deeply involved in stabilization and credit policies; and they operate provincial monopolies in the supply and pricing of fluid milk and wines. Furthermore, as is shown in Table 15-11, there are few commodities in which provincial governments are not interested in trade arrangements because the product is not produced within their boundaries. And even where production makes only a marginal contribution to provincial farm income (see Table 15-12), provincial authorities are characteristically solicitous of their producers' interests.

In practice, however, there have been few disputes between the two levels of government on the strategy, details, or conduct of agricultural trade policy. This is essentially due to the concurrence of objectives — securing improved access to other countries' markets while surrendering little protection against foreign agricultural products entering Canada, and supporting the GATT multilateral trade negotiations (MTN) codes on trade conduct (subsidies/countervail, technical standards, pro-

TABLE 15-11 Composition of Agricultural Output, Canada and Provinces, 1983
(by value)

	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Wheat	22.2	—	0.2	0.3	0.2	0.3	1.9	31.5	63.9	26.3	1.6
Oats	0.3	—	0.3	0.1	0.7	0.3	+	0.4	0.1	0.5	0.2
Barley	4.6	—	1.2	0.1	0.3	0.7	0.3	8.6	6.9	10.9	1.0
Rye	0.3	—	—	—	—	—	+	0.8	0.7	0.3	+
Flaxseed	0.8	—	—	—	—	—	—	5.0	1.2	0.4	—
Canola	3.8	—	—	—	—	—	—	6.8	6.6	8.6	1.6
Soybeans	1.1	—	—	—	—	—	4.3	—	—	—	—
Corn	3.1	—	—	—	—	4.3	8.7	1.3	—	—	—
Sugar beet	0.2	—	—	—	—	0.1	—	0.7	—	0.7	—
Potatoes	1.4	2.8	39.5	2.0	22.6	1.2	0.8	1.7	0.1	0.7	1.6
Fruits	1.4	2.4	0.8	9.2	3.8	1.2	2.1	—	—	—	10.9
Vegetables	2.3	5.6	2.2	3.2	4.3	2.8	4.9	0.5	+	0.4	6.8
Tobacco	1.6	—	6.7	1.0	0.6	0.8	5.1	—	—	—	—
Other crops	3.5	5.0	3.8	4.6	1.8	1.9	5.8	3.9	1.7	2.1	8.5
Total crops	46.7	15.8	54.6	20.4	34.4	13.7	33.9	61.2	81.2	51.1	32.2
Cattle and calves	19.0	5.1	12.7	11.0	10.3	9.4	23.4	16.5	11.9	31.5	15.4
Hogs	9.1	14.4	11.2	12.4	9.5	20.2	11.9	8.6	2.0	5.3	5.2
Sheep and lambs	0.1	0.4	0.1	0.5	0.1	0.1	0.2	+	0.1	0.2	0.2
Dairy products	13.8	20.3	14.5	28.7	22.7	35.8	16.7	5.5	1.7	5.6	24.1
Poultry	4.0	21.7	0.5	10.2	10.4	7.2	5.5	2.3	0.7	2.0	8.6
Eggs	2.5	21.5	1.5	8.6	6.0	2.9	3.7	2.5	0.5	1.2	6.6
Other livestock	0.9	0.8	1.0	4.2	1.6	1.0	0.9	1.1	0.4	0.8	2.2
Total livestock	49.6	84.2	41.5	75.5	60.5	76.6	62.3	36.5	17.2	46.5	62.4
Other cash receipts	3.8	+	4.0	4.1	5.1	9.7	3.8	2.3	1.6	2.4	5.4
Total cash receipts from farming	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Agriculture Canada, Proceedings of the Canadian Agricultural Outlook Conference, Market Commentary, December 1983, Tables I and II.

TABLE 15-12 Provincial Shares of Canadian Agricultural Commodity Output, 1983
(by value)

	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
						(percent)					
Wheat	100.0	—	+	+	+	0.2	2.3	13.3	60.5	23.3	0.3
Oats	100.0	—	1.1	0.4	3.0	17.9	4.8	13.9	14.0	41.8	3.1
Barley	100.0	—	0.2	+	+	2.3	1.8	17.3	31.0	46.2	1.0
Rye	100.0	—	—	—	—	—	1.4	24.9	51.3	22.2	+
Flaxseed	100.0	—	—	—	—	—	—	59.0	30.9	10.1	—
Canola	100.0	—	—	—	—	—	—	16.7	36.6	44.6	2.1
Soybeans	100.0	—	—	—	—	—	100.0	—	—	—	—
Corn	100.0	—	—	—	—	21.1	74.9	4.0	—	—	—
Sugar beet	100.0	—	—	—	—	9.6	—	28.1	—	62.3	—
Potatoes	100.0	0.7	26.4	1.7	16.6	12.4	14.9	10.8	2.0	9.6	5.2
Fruits	100.0	0.3	0.5	8.0	2.9	12.9	38.9	—	—	—	36.5
Vegetables	100.0	0.5	0.9	1.7	2.0	18.3	56.6	2.1	+	3.8	14.1
Tobacco	100.0	—	4.1	0.8	0.4	8.0	86.7	—	—	—	—
Total crops	100.0	+	1.1	0.5	0.8	4.7	19.7	13.1	36.0	21.7	3.3
Cattle and calves	100.0	+	0.6	0.7	0.6	7.5	32.8	8.1	13.2	32.6	3.9
Hogs	100.0	0.3	1.1	1.7	1.1	33.5	34.8	8.8	4.5	11.5	2.7
Sheep and lambs	100.0	0.5	0.7	4.4	0.7	11.9	40.2	4.5	7.3	21.7	8.3
Dairy products	100.0	0.3	1.0	2.6	1.7	39.4	32.3	3.7	2.6	7.9	8.3
Poultry	100.0	1.0	0.1	3.2	2.7	27.1	36.5	5.4	4.0	10.0	10.2
Eggs	100.0	1.6	0.6	4.2	2.5	17.2	39.1	9.4	3.7	9.1	12.5
Total livestock products	100.0	0.3	0.8	1.9	1.3	23.4	33.6	6.9	7.3	18.5	6.0
Total cash receipts	100.0	0.2	1.0	1.2	1.1	15.1	26.7	9.3	21.0	19.7	4.8

Source: Agriculture Canada, Proceedings of the Canadian Agricultural Outlook Conference, *Market Commentary*, December 1983, Tables I and II.

curement, customs valuation, and the like) so long as they do not compromise important national and provincial agricultural interests and programs, or constrain freedom of farm policy action. Another reason for the lack of friction is the fact that Agriculture Canada has kept provincial agricultural ministers and officials (and commodity groups) informed of trade policy developments and has actively involved them in the conduct of international commercial diplomacy. Furthermore, for the commodity groups for which access to the Canadian market is most completely restricted — manufactured dairy products and poultry meats and eggs — the import controls are an integral part of national supply management and pricing arrangements in which the federal and provincial governments (and producers' organizations) are joint and equal partners.

The only instance, to this author's knowledge, where federal and provincial agricultural trade policies have come into direct conflict was in the application of the procurement code devised in the MTNs — to which the federal government is a signatory — to the operation of provincial liquor monopolies. Here the provinces appear to have agreed to remove discriminatory handling charges but have continued the practices with respect to procurement and markups that favour provincial production over competing imports.

Canada-U.S. Agricultural Trade

Extracontinental Trade

The dominant characteristic of the relationship between Canada and the United States on agricultural trade policy is their common position toward the rest of the world. Both countries export the same range of agricultural and food products (or close substitutes), both serve the same markets, and both find their interests harmed by restricted access to import markets, by subsidization of high-cost production world-wide, and by the unfair competition they face in third markets from subsidized exports. Also, both restrict access to their own markets of low-cost supplies of dairy products and beef from extracontinental sources.

There are, of course, some differences between the two countries in their multilateral agricultural trade policy stances. Four examples may be cited. First, Canada has historically been more favourably disposed than the United States toward the enactment of an international wheat (or grains) agreement with economic provisions. Second, Canada must always be cautious that the United States does not use its greater negotiating weight to secure better trade conditions for its particular product mix (for instance, the market access for corn and soybeans must not be better than that for barley and canola). Third, the United States is the largest single outlet for Canada's food and agricultural exports (18

percent in 1983), whereas Canada takes only some 5 percent of total U.S. agricultural exports. Canada therefore places great emphasis on securing improved and assured access to the U.S. market while Canada is not a major focus of U.S. agricultural commercial diplomacy. Finally, Canada has an even greater stake than the United States in having the MTN subsidies code rewritten so as to curb the use of export subsidies. For, unlike the United States, Canada cannot afford to “fight fire with fire” and match the export subsidies paid by others, and risks being seriously harmed in the cross-fire if a general subsidy war were to occur.

While the commercial rivalry between the two countries in third markets is intense, particularly in sales of grains and oilseeds, disputes about the terms of this competition are not presently a notable feature of the relationship. Canadian authorities are apprehensive that an expanded U.S. blended credit program will provide unfair competition in world grain markets and that an expanded surplus disposal program by the United States under Public Law 480 will erode commercial sales opportunities. For its part, the United States continues to complain that the Canadian Wheat Board as a state trading agency is able to make sales at below current market prices to secure particular transactions. And U.S. authorities also accuse Canada of failing to share with the United States the burdens of adjusting grain supplies (production and stocks) to available world markets. Looking to the future, U.S. authorities may well make an issue of the subsidy to Prairie grain production and export provided under the Western Grain Transportation Act of 1983. So long as the Crow benefit was concealed in payments for branch-line rehabilitation, cross-subsidies from other products, and reduced earnings to the railways’ shareholders, its size and effects were as obscure to Americans as they were to most Canadians. Now that the subsidy is overt, it can be seen to confer a substantial and — in international terms — unfair aid to exports.

Bilateral Trade

In continental trade, Canada and the United States exchange a diverse set of food and agricultural products, and the value of this trade has grown in recent years (Tables 15-13 and 15-14). Also, Canada’s historic agricultural trade deficit with the United States has narrowed because Canada has reduced its corn imports and has developed a large trade surplus with the United States in live animals and red meats.

The conditions of access for food and agricultural products for each country to the other’s market, and the terms under which their producers compete are determined both by formal frontier barriers and by the national agricultural policies that lie behind them. A situation of high frontier barriers and little trade in particular commodities does not necessarily mean, however, that trade is seriously distorted or is a matter of contention between the two countries. For instance, the minimal

trade that occurs in grains (other than corn), fresh milk, and manufactured dairy products is because of the quantitative import restrictions that are an integral part of the separate but parallel systems of income support provided to grain and milk producers in each country. Similarly, although both countries impose quantitative (and health and sanitary) restrictions on imports of bovine meats, these are aimed primarily at offshore suppliers and do not normally restrict trade between the two

TABLE 15-13 Canadian Exports of Agricultural Products to the United States, 1974-83

Commodity	Average 1974-78	1979	1980	1981	1982	1983
(millions of dollars)						
All agricultural commodities	606.3	1,007.3	1,112.7	1,260.2	1,606.1	1,736.4
Grains	47.6	29.8	36.2	38.8	73.0	65.8
Grain products	45.1	68.5	83.5	93.5	108.0	122.3
Animal feeds	43.7	61.7	68.2	77.4	80.6	99.0
Oilseeds	20.1	26.5	27.1	72.6	43.1	58.0
Oilseed products	4.6	8.0	9.4	19.3	14.6	26.7
Animals, live	102.4	193.2	202.7	166.2	264.3	271.0
Beef and veal	40.7	95.8	109.8	126.1	139.0	137.8
Pork	24.7	75.0	136.2	156.4	269.1	232.5
Other animal products	60.3	97.6	93.2	90.9	83.8	85.3
Dairy products	8.0	11.5	7.2	8.9	10.7	12.0
Poultry and eggs	7.2	6.8	12.0	12.1	11.6	18.1
Fruits and nuts	27.4	46.0	40.9	46.8	65.0	65.4
Vegetables (excl. potatoes)	19.1	32.8	39.5	46.5	57.7	81.0
Potatoes and products	7.2	11.8	18.6	42.1	44.2	36.2
Seeds for sowing	15.4	17.5	17.2	18.2	19.6	39.5
Maple products	7.1	12.5	13.0	15.2	17.2	18.3
Sugar	19.3	40.8	1.1	1.9	26.0	36.7
Tobacco	5.2	18.3	13.0	20.9	33.8	26.0
Vegetable fibres	5.0	7.4	7.6	11.9	18.8	20.4
Plantation crops	11.2	8.8	5.2	11.2	21.5	20.2
Other agricultural products	68.1	108.3	139.3	141.9	154.6	206.1

Source: Agriculture Canada. *Canada's Trade in Agricultural Products* (Ottawa: Supply and Services Canada, annual).

TABLE 15-14 U.S. Exports of Agricultural Products to Canada, 1974-83

Commodity	Average 1974-78	1979	1980	1981	1982	1983
(millions of dollars)						
All agricultural commodities	1,871.0	2,678.4	2,916.2	3,263.7	3,060.5	3,117.8
Grains	119.3	142.3	218.5	251.3	158.9	110.8
Grain products	44.4	64.4	79.5	87.3	91.1	107.8
Animal feeds	33.2	51.2	56.8	61.6	75.6	72.7
Oilseeds	134.4	173.7	191.3	161.3	190.1	161.9
Oilseed products	164.2	231.7	207.7	214.1	195.7	227.3
Animals, live	61.5	45.2	84.6	165.8	96.1	91.8
Beef and veal	24.6	26.1	34.2	52.8	47.8	56.3
Pork	103.7	62.8	30.3	38.7	36.6	36.5
Other animal products	106.6	229.8	201.0	209.5	184.3	205.7
Dairy products	7.4	10.3	10.4	10.3	10.9	10.5
Poultry and eggs	44.8	71.5	55.6	69.4	73.3	76.7
Fruits and nuts	373.5	595.8	648.1	735.2	773.6	741.8
Vegetables (excl. potatoes)	228.9	353.7	354.6	444.7	458.6	483.7
Potatoes and products	27.9	25.3	28.3	49.0	36.3	34.9
Seeds for sowing	26.4	53.7	52.2	56.9	45.9	48.1
Sugar	25.9	13.4	41.8	37.3	15.3	22.6
Tobacco	5.3	7.1	31.5	5.5	10.2	20.3
Vegetable fibres	63.2	101.6	119.5	126.5	74.8	100.5
Plantation crops	117.0	182.6	223.9	175.2	164.8	167.1
Other agricultural products	140.2	215.0	224.3	283.6	291.6	309.6

Source: Agriculture Canada. *Canada's Trade in Agricultural Products* (Ottawa: Supply and Services Canada, annual).

countries. Canada's quantitative restrictions on imports of eggs and poultry meats have not eroded the historic share of U.S. suppliers in the Canadian market. Similarly, U.S. quotas and levies on imports of raw sugar are of little direct consequence to the minuscule Canadian sugar beet industry (although they do adversely affect sugar processors). At the other end of the spectrum, commodities that are not the subject of extensive government intervention and ambitious price- and income-support programs in either country are traded freely between them, usually over modest and falling tariffs (Tables 15-9 and 15-10). Notable

examples are cattle and beef, hogs and pork, corn, soybeans, and many fresh and processed fruits and vegetables. For products in this category, a substantial measure of tariff reduction and harmonization and abolition of tariff quotas (on cattle and potatoes) was achieved in the Kennedy and Tokyo rounds of multilateral trade negotiations. Canada raised tariffs on selected fresh and processed fruits and vegetables in 1979, but the United States was adequately and amicably compensated by the offsetting downward adjustments to tariffs outside the tariff calendars.

There are, of course, plenty of differences between the United States and Canada on bilateral agricultural trade conditions that are either of a long-standing character or that are emerging as contentious issues (Carter, Chambers, McCalla and Storey, 1984). For instance, the U.S. grape and wine industries have long suffered from the discriminatory procurement and margin policies of Canada's provincial liquor boards. U.S. growers of grains and oilseeds can now complain that the Crow subsidy will be paid unfairly on eligible products shipped from Vancouver or Thunder Bay into the United States since the United States was designated as an export area under the Western Grains Transportation Act. The operation of the Canadian fast-track system for giving temporary protection against injurious imports may become a significant trade issue between the two countries (witness the incipient potato war of 1984).

Currently, the most contentious bilateral agricultural trade issue concerns U.S. complaints about the price subsidies and aids to production given to Canadian producers of pork (and to a lesser extent, beef) under federal and provincial commodity stabilization programs and provincial credit assistance programs. U.S. producers have maintained that any stabilization payments — especially those made under the "richer" provincial "assurance" programs — and all capital subsidies constitute unfair competition. Canadian authorities have maintained that payments to implement "stop-loss" or floor price guarantees are neutral with regard to output and trade, and the federal government has further sought to avert countervailing action by making payments only on output consumed domestically. The commitment to provide effective price and margin stabilization to producers is a cornerstone of Canadian agrifood policy (Agriculture Canada, 1981). Hence, if the provisional finding of the U.S. International Trade Commission made in late 1984 regarding injurious subsidization is confirmed, and if countervailing action is taken, there could be very serious consequences for U.S.-Canadian agricultural trade in live animals, red meats, and a broad range of other agricultural products.

Looking further down the road, another potential development in Canadian agricultural policy contains the seeds of bilateral trade conflict. If Canada were to introduce national formula pricing and supply management programs for red meats, potatoes, and tobacco — a policy

favoured by many — it would be necessary to impose quantitative controls on imports of these commodities from the United States and elsewhere. This step would surely provoke strong U.S. opposition and probably border retaliation, too. Even if present market shares were respected, future trade conflicts would be much more likely.

Expanding Canadian-U.S. Agricultural Trade

Given the extent of government involvement in agriculture and the fact that agricultural policies and programs frequently entail the management of trade in farm and food products, it is not surprising that the general aim of liberalizing Canada-U.S. trade in agricultural products is not prominent in the objectives of producers or political leaders on either side of the border, although the need for improved and assured access is, of course, selectively advocated by commodity groups of each country that happen to be in a net export position.

Integration of the two markets through competitive trade would involve not only lowering frontier barriers to exchanges of farm and food products but also harmonizing agricultural policy objectives and the instrumental programs that give effect to them. The problem is that there are real differences between the two countries in the specific objectives of their farm and food policies, in the weights that attach to the common elements of their policy sets, in the degree of support given to particular commodity groups, in the policy instruments that are employed, and in the institutional setting in which farm policy is made and operated.

Examples can readily be suggested. First, it appears that agricultural policy is generally more interventionist and involves a wider range of products in Canada than in the United States. Second, whereas Canadian authorities attach great weight to stabilizing farmers' prices and margins around responsive, market-determined trends for a wide range of commodities, the stabilization objective is neither as prominent nor as evident in U.S. agricultural policies and programs. Third, Canadian dairy policy makes far larger income transfers to milk producers than U.S. dairy policy provides to its dairy industry. On the other hand, whereas the degree of subsidization of wheat production appears to be broadly similar in both countries (Glenn, Carter and Tangri, 1984), the techniques by which income is transferred to wheat growers are quite different, with Canada placing relatively more reliance on transport subsidies, and U.S. programs favouring direct payments. Finally, there is no parallel in the United States to the situation in Canada in which the provinces effectively run their own agricultural policies in parallel with federal programs in such important areas as price stabilization and farm finance.

The fact that policy differences have an impact on bilateral trade conditions has been well documented (Menzie and Prentice, 1983). The extent to which they distort competitive bilateral trade flows, and the

ways in which national programs — in the areas of agricultural credit and taxation as well as in commodity policy — would have to be adapted so as to harmonize competitive conditions, have not as yet been studied.

Meantime, as noted earlier, trade in live animals and red meats is already relatively unfettered, and the red meats subsector of agriculture is the most obvious candidate for formal inclusion in a bilateral free trade arrangement. Before this could be accomplished, however, the issue of Canadian stabilization payments and credit subsidies would have to be resolved, since U.S. producers and authorities perceive these measures to be distorting trade by creating unfair conditions of competition. It would also be necessary to harmonize the counter-cyclical meat import laws in the two countries regarding the treatment of each other and of offshore suppliers. Similarly, the differing commitments for minimum access of beef agreed to under the MTNs, and their health and sanitary regulations would have to be made more uniform. It would not be possible to have a subsectoral free trade arrangement for red meats if Canada embraced formula pricing and supply management programs for the beef and pork industries. However, this development does not at present command sufficient support for it to be in the offing.

Notes

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Regional Considerations and Canadian Trade Policy

Summary of the Proceedings of a Research Symposium

COLLEEN HAMILTON AND
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Since Confederation, Canadian trade policies and regional interests have been inextricably linked. People in the eastern and western provinces have long viewed the tariff as an instrument through which central Canada has gained an advantage over them. The tariff is seen as protecting mainly manufactured products which are produced in Ontario and Quebec, forcing the consuming provinces in hinterland regions to pay higher prices for goods produced in central Canada, as well as for manufactured imports. The tariff is viewed as causing larger volumes of interprovincial trade and smaller volumes of international trade, and of transferring income to central Canada from the hinterland regions.

Whether or not this perception is true, over the years it has strongly influenced the conduct and formulation of our trade policies. It has generally been assumed that western and eastern provinces would welcome any move towards free trade, whether unilaterally, bilaterally through a negotiated arrangement with the United States, or multilaterally through GATT negotiations, and that Ontario and Quebec would be opposed.

However, this traditional "heartland/hinterland" view of Canadian trade policy is now being challenged from several quarters. Tariffs are much lower than in the past. Also, the potential for exploiting economies of scale in a bilateral free trade arrangement with the United States has caused some to argue that all regions, including central Canada, would benefit from bilateral free trade. Furthermore, the concept of a region and how it is affected by changes in trade policies has altered. If factors of production are mobile between regions, how can it be determined whether a region gains or loses from a change in trade policies? Some of the existing residents will be affected, but if workers move in response to changes, the very idea of a region is not well defined and interregional

effects become hard to nail down. Another consideration is the effect of interregional ownership of assets. Because many Canadians own assets in companies outside their home province, the interregional impact of changes in our tariffs or other trade policies may be quite complex when followed through to the ultimate recipients of factor rewards.

There are also questions of regional impacts of non-tariff measures, federal-provincial consultation in formulating national trade policy, and how the provinces may react to bilateral or multilateral initiatives toward freer trade. Since by 1987 our tariffs will be low, we must look at the regional impact of non-tariff measures which may offset or compound the regional impact of the tariff. A good example is the pattern of quotas and tariffs on textiles, clothing, and footwear, which is widely seen as benefiting Quebec much more than other provinces. Federal-provincial consultation seems to have worked well during the Tokyo Round, but there may not be the same degree of agreement in future consultations. The provinces are only beginning to think through their own positions on the issues which might arise in future bilateral or multilateral trade negotiations.

These issues and others were addressed in a Royal Commission research symposium organized by the Research Advisory Group on Trade Policy (Economics), held on May 22, 1984. The participants (listed at the end of this paper) were scholars and government officials with expertise in trade issues. Six brief papers and two oral presentations presented the key issues and provided a focal point for discussion. This paper summarizes the main points of the presentations and discussions. Some of the papers have since been revised and expanded for publication by the Commission. The papers presented by Ronald Shearer, James Melvin and Thorald Warley appear in this volume. Fergus Chambers' paper appears in *Selected Problems in Formulating Foreign Economic Policy*, Volume 30 of the Commission's research series.

In the first symposium session, on the regional impact of tariff policies, Ronald Shearer discussed the traditional heartland/hinterland view of the regional impact of both Canadian and foreign tariffs and evaluated the prospects for a provincial government consensus on a move to free trade. James Melvin presented his analysis of the regional impact of tariffs, particularly the implications of higher interregional than international transportation costs. Fergus Chambers outlined some of the differing views on regional economic development patterns and the implications for Canadian trade policies.

In the session on the regional impact of non-tariff measures, Thorald Warley discussed the effects on the agricultural sector and possible ways of improving our trade policies in this area. Robert Wright discussed the regional costs and benefits from trade and other policy changes over the past two decades affecting oil and natural gas. Fred Lazar addressed the

difficulties in determining the regional effects of non-tariff measures as they relate to manufacturing.

In the session on formulating and negotiating national trade policy, Melvin Clark discussed the federal-provincial relationship during the Tokyo Round, and presented his views on what a new Multilateral Trade Negotiation (MTN) would entail. Edward Shaske offered his assessment of federal-provincial relationships during the Tokyo Round from a western perspective and discussed the interests of the province of Alberta in possible future directions for our trade policies.

In the final session, Kenneth Norrie discussed the trade policy dimensions of the internal Canadian economic union.

Session One:

Regional Impacts of National Tariff Policies

Ronald Shearer presented a paper discussing the traditional view that Canada is made up of an industrial core and a resource-based periphery. In Shearer's opinion, despite recent literature suggesting that this distinction may be less important today than in former years, it is still both relevant and important. He argued that our international trade policies impose different regional burdens because they are designed to protect industries in which we have no comparative advantage. Consequently, they alter the international and interregional terms of trade between manufactured goods and industrial raw materials. This encourages the production of manufactured goods and indirectly discourages the production of raw materials, with differing impacts on the manufacturing and resource-producing regions.

In discussing the long-term gains from the movement to free trade, either unilaterally or bilaterally, Shearer asserted that in the long run the benefits will accrue to the owners of immobile resources (such as farmers who own land) and, perhaps more importantly, to provincial governments who both own land and resources and are able to tax immobile factors. This supports the traditional view that the provincial governments in the hinterlands, particularly in the West, have a strong interest in international free trade, especially in the removal of Canadian trade barriers. However, Shearer also cited the tendency of most of the eastern and western provinces to seek industrialization as a policy goal, *per se*, and suggested that this would lessen their interest in free international trade. He was pessimistic about the possibility that a consensus could be worked out between provincial governments on national trade policies.

James Melvin's paper emphasized the lack of general-equilibrium theoretical literature on which an analysis of the regional impact of tariffs can be based. Melvin pointed out that regional differences in income and even in wage rates do not necessarily imply the existence of a policy problem. Some of these differences may reflect the relative differ-

ences in satisfaction derived by individuals locating in one part of the country over another. In other cases, federal government policies themselves may create disparity between regions. In Melvin's view, this underlines the need to know the causes of any regional income or other differences attributed to tariffs or other policies before formulating a response.

Melvin also emphasized that the issue of transportation costs has been generally neglected in international trade theory, mostly because internal transportation costs are more important barriers to trade than international costs, although the two are not unrelated. Melvin traced the interregional effects of a national tariff in the extreme case where international transportation costs are zero, while interregional costs are positive. A more typical case applicable to Canada is a situation in which it is cheaper to move goods from Toronto to Buffalo or from Vancouver to Seattle than from Toronto to Vancouver.

Looking at a tariff in a simple two-region, two-commodity trade model (initially with constant returns to scale), Melvin argued that as the tariff increases, a point is reached at which it becomes cheaper to buy the protected commodity from the other region in Canada rather than importing it. This switch from international to interregional trade results in a loss to Canada equal to the additional cost of transporting commodities between regions. The interregional effect of the tariff is to stimulate interregional trade at the expense of international trade. However, there is a loss of tariff revenues to the government. Also the region producing the protected commodity receives only the price of its product net of transportation cost, while the purchasing region must pay the transportation cost. In this analysis there are no interregional gainers from the tariff.

Melvin also noted that because the tariff affects regions differently, it results in different commodity prices among regions, implying that factor prices will also become unequal. In his simple model, if regions have different factor endowments and consequently different trade patterns, then a national tariff may reduce the wage rate in labour-abundant regions.

Melvin considered a further case incorporating increasing returns to scale (i.e., where costs per unit fall as output rises). In these circumstances, he concluded, small regions (including hinterland provinces) may be made worse off if tariffs in Canada are removed. His argument was that small regions tend to underproduce commodities in which there are increasing returns to scale, and that these regions gain if the production of these goods is encouraged by protection from tariffs. Melvin also argued, however, that if this is true then production subsidies and not tariffs are the more desirable policy instrument to stimulate production.

Fergus Chamber's paper discussed regional economic patterns in Canada and the way our trade policies have affected them. Chambers

argued that there has been a significant change in regional economic interests in recent years which could well result in a different emphasis in trade policies in the years ahead.

Chambers reinforced the scenario of the regional view, in which resource-abundant regions have been more interested in freer bilateral or multilateral trade than industrial regions because they depend more on exports and rely heavily on access to the U.S. market. In his view, the industries and regions involved in secondary manufacturing have focussed on the Canadian market and pressured for protection from foreign competition. Chambers noted that protectionism has been the dominant trend in trade policy in Canada for the last hundred years because these sectors and regions that have controlled the political power base in the country. However, he contended that while the resource sectors and regions still support freer trade, changes are occurring among the manufacturing sector and regions. He attributed this changing attitude to five causes:

- A change in the manufacturing/resource terms of trade. There has been a reversal in the terms of trade between manufacturing industries and resource-based industries over the last ten years.
- Increased competition for factor inputs. The two sectors have now become competitors for industrially trained and skilled labour and other factors of production.
- A decline in protection. The decline in tariffs in the postwar period and reductions in the costs of servicing more distant markets have produced pressures on many secondary industries to change their market orientation more into export markets.
- Growth abroad. The high growth rates of the European and Japanese economies since the Second World War have provided greater export opportunities, which are still growing.
- The role of new technologies. New technologies, particularly those of a labour-saving nature, have tended to increase the proportion of a firm's fixed costs relative to variable costs and made it essential for firms to sell to larger markets abroad in order to realize the benefits of large scale production.

Given these important changes, Chambers distinguished two potential directions which Canadian firms can take. They can "go on the public dole," as he termed it, by pressuring for quantitative import restrictions, larger government subsidies (direct or indirect), and various types of special assistance. Or they can make a major effort to become internationally competitive. Since this would require access to markets outside of Canada, in particular the United States, there would be increasing pressure for freer trade.

While there is movement away from the traditional view of the regional impact of our trade policies and the merits of free trade for heartland

provinces, Chamber emphasized that at present mixed messages are still emerging.

The discussion of the Shearer, Melvin and Chambers papers touched on a wide range of topics but a few key questions emerged. Is there a move away from the traditional view of the industrial-heartland/hinterland development concept? If so, where will industrialization be concentrated, if any will indeed take place?

In initiating the discussion, one participant registered a mild protest over the use of the terms "resource-based" and "industrialized" as a shorthand for the industrial heartland and hinterland regions. In his view, this represented a misunderstanding of the nature of our food production system, in particular of the way modern agriculture works. He drew attention to the fact that modern agriculture is both a technology- and capital-intensive industry. In Canada, agriculture uses eight times more capital per dollar of value-added than manufacturing and four times as much capital per worker. Moreover, the food processing industry, which is Canada's largest manufacturing industry, is not concentrated in heartland provinces, but is spread across the country roughly in proportion to the population.

One participant questioned whether there was a contradiction in Shearer's view that the traditional heartland/hinterland scenario is the relevant one and that support for free trade is waning in British Columbia and some of the other western provinces. In the participant's view, the traditional view should be jettisoned for good in light of the changing industrial structure of these provinces and provincial policies aimed at providing local protection against outside suppliers.

It was further argued that protection is increasingly not so much a regional as a sectoral issue. For example, the West would like access to more and cheaper Japanese cars but would also like Canada to adopt a more protectionist policy with respect to meat imports from the United States.

Shearer defended the traditional view, stressing that this still provides for the underlying concerns so long as national trade barriers exist. He did, however, agree with the description of the political reality that sectoral pressures for protection often accompany regional pressures.

The sentiment that foreign barriers have little or no cost to the West and Atlantic Canada because of the relative absence of manufacturing activity in these provinces was questioned by another participant. He pointed out that the very existence of foreign barriers may have prevented more manufacturing plants from establishing in those provinces.

One commentator drew attention to the fact that Melvin's analysis is primarily focussed on the issue of unilateral free trade (the lowering of Canadian tariff barriers). He suggested that when talking about economies of scale, the big returns to Canada are in terms of better access to foreign markets. Melvin agreed that his analysis does not capture the

benefits of improved access to the U.S. market but noted his cautions about the size of gains from free trade with the United States.

Another observer focussed on whether interregional and international trade flows correspond to what is postulated in Melvin's analysis. He asserted that interregional trade flows within Canada are falling and international trade flows are growing. He described how the Department of Regional Industrial Expansion formulates its approaches to regional industrial development through a combined political, economic and social perspective, and asked how trade policies can be used to achieve more equal access to income-earning opportunities throughout the country.

Melvin acknowledged that there are many factors to be taken into account in a more complete analysis but noted that his simple model is only an initial framework for analysis. He pointed out that falling inter-regional trade fits with his analysis in light of lower tariffs and higher fuel costs. He also stressed that this has an important implication for trans-continental transportation — that now may not be the time to spend large sums of money on improvements to our facilities.

A question was also raised about the need to look at employment effects in assessing the interregional effects of protection. In response, it was suggested that tariff policies should not be used as an instrument to generate employment. This point was reinforced by another participant, who stated that the point is not to generate employment but to increase productivity and income while dealing with employment in other ways, such as macro policies.

One participant questioned whether Chambers' observation that the manufacturing/resource terms of trade had reversed from previous decades would still be correct if energy was excluded. He noted the effects deflationary pressures have had on the price of such minerals as iron ore and copper.

Chambers replied that irrespective of how the terms of trade had changed, the issue is what kind of manufacturing industry can survive in Canada. While not envisaging *no* manufacturing, he recognized that there must be some selectivity. In addition, he stressed the need for policies to assist in the adjustment process, particularly with respect to Ontario and Quebec, as well as an emphasis on a North American marketing approach.

Session Two:

Regional Impacts of Non-Tariff Measures

Agriculture Thorald Warley gave a brief but thorough description of mutual federal-provincial interests in agricultural trade policies within the broader context of the global trading system. He identified the basic objectives of federal involvement in the agricultural sector as: maintain-

ing a secure food supply, produced mostly from national resources; assuring market stability; influencing the mix of outputs; influencing industrial structure and factor returns; and improving the pace of adjustment and promoting sectoral development. Within our national borders, these objectives are achieved through the use of subsidies on products and inputs, tax expenditures, and suspension of competition norms. At the frontier, imports are controlled by a variety of tariff and non-tariff measures and exports are assisted with direct subsidies, cheap credit, surplus disposal schemes and by state-funded foreign market development schemes.

While Warley felt that Canada has a "creditable" record of supporting efforts in the GATT and elsewhere to improve conditions of world agricultural production and trade, he noted that in practice Canada's generally liberal stance on international agricultural policy has given way to the pressure of national agriculture and food policies and programs. Canada has, by and large, favoured improved worldwide access for products in which we have a comparative advantage, while restricting imports of products from countries with which we compete with less success.

Warley also discussed provincial agricultural policies, noting that the provinces are deeply involved in stabilization and credit policies, and operate provincial monopolies in the supply and pricing of fluid milk. The major source of federal-provincial conflict in the agricultural product area has been the application of the MTN procurement code to the operation of provincial liquor monopolies. The provinces have agreed to remove discriminatory handling charges but retain their practices with respect to procurement and mark-ups that favour provincial production over competing imports.

While the current Canada-U.S. agricultural relationship is characterized by a large degree of harmonization, Warley speculated that if Canada were to implement supply management or formula pricing arrangements for red meats, potatoes and tobacco, the resulting import controls on these products would likely encounter strong U.S. opposition.

Warley concluded his remarks by noting that tariffs are the least important of the measures that provide effective protection for agricultural products. He described the international trade policy agenda as being mostly concerned with "stopping the rot" rather than effecting any substantial improvement in conditions for agricultural trade. In Warley's view, the agricultural sector epitomizes the difficulties to be encountered in any future GATT round.

Energy Robert Wright gave an oral presentation focussed on regional issues and foreign trade policies affecting the oil and natural gas industries. He drew attention to the regional implications of energy

policies. Eighty-five percent of oil and natural gas production is concentrated in Alberta, while consumption is heavily concentrated in the East, primarily in Ontario. Wright discussed Canadian energy policies before 1974, the changes effected in 1974, and current policies.

Before 1974, energy policies were intended to secure the domestic market for domestic production. Oil imports were restricted west of the Ottawa Valley line, enabling western producers to market their oil at prices above those applying to imported oil in Quebec. For similar reasons, the federal government built the TransCanada pipeline into Ontario at a time when Ontario consumers were interested in buying imported natural gas from the United States. While these policies resulted in higher energy prices, they improved security of supply. Wright noted that these policies were considered successful at the time, and that the Canadian oil industry grew substantially in the 1960s.

However, serious supply questions began to appear in the early 1970s. There were large exports of natural gas through the 1960s, but by the early 1970s there were doubts about the future availability of natural gas for expanding domestic markets and renewals of existing contracts to distributors in Ontario. A similar situation prevailed in the oil industry. Most oil production was from large pools in Alberta, each lasting about 15 to 20 years. By the early 1970s, it was expected that actual production from oil would fall to half its current levels within eight years.

Changes in our energy policies in 1974 were influenced in part by the OPEC price rises but also by changed perceptions on the supply side. For natural gas, a more stringent test of available surplus reserves for future production was required before any increased exports would be authorized. There was also a major change in oil export policies. The National Energy Board recommended two steps. The first was to expand the domestic market for existing production into Quebec, a move that was facilitated by the construction of the extension of the IPL oil pipeline to Montreal. The second was to shut in oil production in western Canada (i.e., to limit development of known reserves), while phasing out exports of light crude oil. Wright noted that this policy imposed significant costs. Oil producers were required to have shut-in capacity of 20–25 percent of potential production, limiting their cash flow. There were, however, generous federal tax incentives to help offset these costs in the natural gas sector. Oil producers bore the costs of shut-in capacity, but they were also one of the key sectors that had benefited from rising oil prices.

In looking at current export policies, Wright observed that while oil security is still a fundamental element in the national energy policy, policies are not as draconian as in previous years. Steps have been taken by the federal government over the last few years to ensure there is little effective shut-in oil supply. This reflects the substantial changes in the world oil market as well as the drop in domestic demand for oil.

Wright concluded by restating that in the 1960s consumers in eastern Canada bore the costs of policies to promote the development of an oil industry in western Canada. In the 1970s the producers bore most on the burden of the policies associated with the National Energy Program. While the tighter restriction on exports in the 1970s had a regional impact of our trade policies, over a longer time horizon they could be viewed simply as a reflection of the need to ensure adequate energy supplies, a concern that has linked western and eastern Canada since well before the 1970s.

Manufacturing Fred Lazar's paper was concerned with general government policies that create non-tariff barriers in the manufacturing sector. He focussed on the difficulties of assessing the impacts of these NTBs. Lazar began by emphasizing that many government policies or regulations, including quotas, subsidies and government procurement policies, could be considered NTBs. While noting the lack of studies that have attempted to quantify the effects of NTBs, Lazar briefly outlined the theoretical approaches used by economists to assess the welfare costs of quotas, subsidies and contingency measures.

Using quotas as an example (such as are found in textiles and autos), the regional allocation of affected industries (either by employment or value-added) suggests that Quebec and Ontario benefit from these quotas at the expense of the other regions. If the same effects occurred with other NTBs (which Lazar acknowledged to be an unreasonable assumption), the probability increases that Quebec and Ontario benefit from NTBs affecting manufacturing and that other regions lose.

Lazar then explained why this simple conclusion is complicated by several considerations. The net welfare loss from a quota may be increased by an additional transfer of income from consumers to some other group. This is because resources will be used in competing for the economic rents created by the quotas. Regardless of who receives the quota rights, the economic value of these resources should be added to the net welfare loss from the trade restriction. It may also not be appropriate to use the regional allocation of producers and consumers of products subject to quotas or other NTBs as the basis for determining which regions are net winners and which are net losers. Since the owners of the capital used in producing the protected goods are among those who benefit, the regional distribution of shareholders should be taken into account when estimating the net regional effects of an NTB. Furthermore, since the effects of quotas will change with variations in the initial conditions assumed in the analysis, today's estimates of the regional effects of NTBs may not be applicable in the future.

Lazar asserted that there is merit in using NTBs to help an industry adjust to changes in the international trading environment. He acknowledged that this argument is generally frowned upon by other economists

but argued that providing temporary protection as part of a package of government policies designed to help an industry and its workers adjust more rapidly and less painfully to changing conditions may be the best course to follow. Even though quotas and other NTBs may seem to cause a net economic loss and redistribute income across groups and regions, alternative measures to facilitate adjustments may be even more costly and can produce a less desirable distribution of income.

In Lazar's view, this argument is particularly applicable in cases where labour is immobile and there is limited downward wage flexibility. To further emphasize the difficulties of analyzing the effects of NTBs without a sound theoretical model, Lazar explained how two different conclusions can be reached in the case of government procurement policies. If they are treated like a quota, they appear to generate a net welfare loss because their effects are similar to those of a tariff. On the other hand, government procurement can also expand the domestic market available for Canadian manufacturers, producing net welfare gains.

In conclusion, Lazar raised three broader questions that he considered to be major regional issues in the trade policy area:

- Is any form of industrial policy necessary?
- What will be the effects of various NTBs included in such a policy, and how successful will they be in altering the dynamics of regional industrial development?
- How will these NTBs be affected by provincial barriers to trade?

In the discussion following the Warley, Wright and Lazar presentations, a query was raised by one participant who felt Warley had overstated the extent of protectionism in the agricultural sector. To his knowledge, there are a good many products that move in international trade and face only a tariff. Moreover, many products enter the United States duty-free and face no significant NTBs. Warley agreed that much agricultural trade between the United States and Canada is tariff-free, but these are mostly continental-based products, such as pork. He re-emphasized that products traded on an international basis do face low tariffs but larger NTBs.

Wright was asked about the import dependence of the Montreal market. He was also asked whether it was still Alberta provincial policy to refuse to supply petrochemical feedstock to firms outside of the province and whether this was one of the obstacles impeding the offshore methanol projects to be located in British Columbia. According to Wright, the Montreal region is still import-dependent, although it is still questionable whether the Montreal-Portland pipeline is viable. As for the methanol plant, Wright felt that the Alberta policy could be a factor but is not the key issue. In his view, the overriding problem is worldwide oversupply. It was Wright's understanding that the Alberta government still held

its position on feedstocks in 1981 when the methanol agreement was signed but that it has since shown signs of flexibility on the matter.

There was also much discussion among the participants over the need for a GATT-like institution in Canada to control interprovincial non-tariff barriers, sparked in large part by the papers on regional aspects of NTBs. One participant argued that the reason the provinces resort to NTBs is they cannot impose tariffs or external quotas since these are in the federal domain. As another participant noted, they have no alternative. Particularly in the case of industrial promotion policies, the provincial government will not relinquish those tools it sees as necessary to meet its objectives.

There was widespread pessimism among participants that provincial governments would even agree to a GATT-like institution to regulate interprovincial barriers unless this body had some financial muscle, such as an industrial fund to assist regions undergoing industrial adjustment. Lazar agreed that unless there was a system that could impose penalties or give rewards to provinces, they would not alter their policies toward NTBs. He pointed out that provincial governments are under pressure from citizens and workers to introduce measures to guard against what they consider unacceptable redistributions of income resulting from other changes in the economic system.

One participant questioned whether publicizing provincial “beggar-thy-neighbour” policies would restrain provincial governments from using NTBs. It was noted that public criticism of a provincial government fighting for a town or an industry might be viewed unfavourably outside of the province but be well received by voters within the province. Not all participants agreed about the usefulness of a GATT-type arrangement for Canada. As one noted, it would be like resorting to a United Nations to solve our political issues. The two GATT functions conceded to be useful in Canada would be compiling an inventory of internal barriers, similar to the procedure carried out before the Tokyo Round, and settling disputes.

Melvin Clark was more optimistic about the chances for significant progress in reducing interprovincial barriers. He noted that near to the end of the Tokyo Round there was some discussion on how to apply this experience to Canada and it was agreed that one way to start would be by assembling an inventory of barriers, classifying them under various headings, and then applying the international GATT codes on a provincial basis. The subject of dispute settlement was also discussed and was articulated in a paper written by Germain Denis after the Tokyo Round. Furthermore, Clark noted that discussions with the provinces had virtually reached a consensus on these matters at the time. Warley interjected that some work had already been done on building an inventory of barriers.

In one participant's view, because of the interrelationships between trade, industrial and regional policies, it seemed necessary to establish a new forum for addressing the whole range of regional issues rather than an institution to deal only with interprovincial trade issues. As another participant put it, the bottom line is recognizing Canada as a trading nation and questioning whether anything can be done to improve our internal common market in order to help us penetrate world markets.

Session Three:

Formulating and Negotiating a National Trade Policy

In his notes prepared for the symposium, Melvin Clark commented on the discussions held between the federal and provincial governments during the Tokyo Round and evaluated their effectiveness. In addition, he offered some suggestions on what might be expected in the future as regards federal-provincial consultation.

Clark reported that the federal government had initiated discussions with the provinces well before the Tokyo Round began as part of formulating policy on increased resource processing in Canada. These discussions were subsequently expanded to include all the issues involved in the Multilateral Trade Negotiations (MTN). While discussions were initially informal, eventually committees were established at the ministerial, deputy minister and senior official levels.

To Clark's knowledge, the federal government had never attempted to play one province against another, and none of the provinces allowed foreign governments to use them by becoming aligned against the federal government. Discussions were limited to trade issues and did not cover any substantive domestic issues such as oil and gas prices. Clark attributed the success of the Tokyo Round experience to the mutual consensus on both policy and negotiating objectives. The federal government kept the provinces informed and both parties "did their homework" in advance of issues being settled.

In Clark's judgment there is at least a 50 percent likelihood that a new GATT round will be initiated in the fall of 1985 or spring of 1986. In his view, the scope of the next round will be even greater than the Tokyo Round. The agenda would comprise not only the same issues as the Tokyo Round but also services, high technology and agriculture. Since negotiations on these issues would necessarily impinge on provincial interests, there would be a need to develop a close federal-provincial relationship similar to that during the Tokyo Round.

Clark stated that in his view the establishment of a special unit to coordinate federal and provincial trade policies is unrealistic at the present time. But such a unit may eventually be needed and should be concerned not only with removal of interprovincial trade barriers but also with preparing for and conducting trade negotiations, including

discussions with the provinces, the private sector and other interested parties. To underline the need for such a unit, Clark referred to the provincial liquor board issue, and the possibility of the United States and the European Community (EC) tabling a complaint against Canada in GATT.

Edward Shaske's oral presentation outlined the federal-provincial discussions during the Tokyo Round from a western perspective. Shaske reported that western provincial interests on these matters were initiated in 1973 at the Western Economic Opportunities Conference, when the western provinces collectively raised the issue of the Canadian tariff structure and the importance of improved foreign market access. It was stressed at the time that Canada's trade strategy must recognize the necessity of a federal-provincial partnership in both the development and implementation of trade policy, given the significant impact of international trade on provincial economies.

Shaske summarized the primary issues of importance to the development of a national trade policy as follows:

- Trade liberalization. Every opportunity to encourage the reduction of trade barriers by our trading partners should be pursued. Moreover, Canada should strive for balanced concessions, preferably in a multi-lateral or bilateral forum.
- Sectoral free trade, particularly with the United States, should be pursued in sectors where all parties stand to benefit. It was suggested this approach could be an alternative to the MTN, where the possibility of reaching a consensus on free trade is remote.
- Competition in the international marketplace will continue to increase in the future. If Canada is to improve its competitive position, there will have to be some adjustments to reflect structural changes. Canadian exporters and producers will have to be in a position to take advantage of new technologies, either through joint ventures, licencing or patents.

While not advocating subsidization of industries, Shaske contended that "Canadian businesses cannot be left to drown in the ocean of international competition." Therefore, competitive export financing should be provided and a healthy environment for investment will be needed. Shaske suggested that trade issues of particular interest to Alberta include services, agriculture, petrochemicals, subsidized export financing, dispute settlement and safeguards. Finally, he stressed that the provinces have to be educated in the implications of international negotiations. In his view, given the importance of provincial jurisdiction, perhaps the provinces should have greater participation in the negotiations, even to the extent of being at the table.

The discussion which followed the Clark and Shaske presentations focussed on some of the more detailed aspects of the federal-provincial

relationship during the Tokyo Round. One participant suggested for consideration a possible Canada-U.S. “focal group” to deal with trade issues. This could take the form of a federal-provincial group, or even a federal-state or province-state economic group to deal with all these issues at the same time. Clark responded that his preference is to deal with the United States at arm’s length. He clarified that the unit he referred to would be strictly Canadian because there are national interests at stake in trade policy. Moreover, he feels there can be federal-provincial consensus on trade policy.

A question was also raised as to whether Canada had played any significant role in previous negotiations and their outcomes. The point made was that if it has not, why bother with a federal-provincial arrangement? Clark affirmed that Canada has had influence in the MTN, although not to the degree of the United States or the EC. Canadian influence has been directed toward greater liberalization. We have exerted considerable influence over a range of NTBs, especially through the negotiated code on government procurement and the aircraft agreement. Clark asserted that if influence is wanted, there must be a policy. Responding to whether Canada should encourage partners to take us to the GATT on liquor policies, he emphasized that it is in our national interest to preserve the liquor board issue as leverage. It would especially be the wrong course of action vis-à-vis the EC to encourage a GATT action.

Another participant drew attention to Shaske’s suggestion that provinces be at the negotiating table, by questioning whether future electors should be bound to agreements made by someone they did not elect. Shaske again stressed the need to educate the provinces ahead of time in matters of international agreements. He strongly asserted there is a need for the provinces to know the implications from a policy perspective when negotiations start in services, agriculture and government procurement in any future GATT round. Shaske’s remark about pursuing every opportunity to liberalize trade was reinforced by another symposium member who added that the unilateral route is still useful as a last resort.

Session Four:

The Economic Union

To conclude the symposium, Kenneth Norrie chaired a brief discussion of the effects of trade policy on the economic union. He noted that the free trade issue and current concerns over our economic union are closely linked because the economic union is a regional trade grouping. In a free trade world there would be no room for a grouping, while if there is not completely free trade, issues surrounding the economic union become more important.

Norrie also pointed out that if establishing codes of conduct or a GATT-like arrangement to limit interprovincial trade barriers entails forcing something on the provinces, there could be better alternatives. It is necessary to consider the Charter of Rights, under which the provinces could potentially opt out of such codes.

The ensuing discussion touched on a variety of topics and reflected much of the preceding discussion during the day. The main points that were emphasized included the feasibility and desirability of a GATT-like institution for Canada, as well as the necessity to clarify what is meant by "regions" and whether it is desirable to preserve them for their own sake. The theme of nationhood, that the union is better than ten separate provinces, also emerged from the discussion, as did the strong need for policies directed toward improving efficiency of resource allocation in the Canadian economy.

From the discussion earlier in the day it was clear the provinces have a strong desire for more meaningful participation in formulating Canadian trade policy, especially given the diverse regional implications associated with a move toward freer trade. It would appear from the opinions expressed that the more traditional view of regional interests in Canadian trade policy may be changing. Not all participants agreed that the resource-based provinces are strongly in favour of freer trade while the industrial provinces, notably Ontario and Quebec, are in favour of retaining protection, as is often thought.

There was a consensus on the need for adjustment policies to deal with industries that are not competitive internationally and are having difficulty coping with perceived structural changes in the economy.

Another theme to resurface time and again was the intimate relationship between trade policy, industrial policy and regional policy, and the fact that none of these can be considered in isolation from the others.

Finally, it was also clear that if there is a new Multilateral Trade Negotiation in the near future, especially one that includes such difficult issues as agriculture and services, preparations should begin at once, especially those involving federal-provincial consultations.

Appendix

List of Participants

RESEARCH SYMPOSIUM ON REGIONAL INTERESTS AND NATIONAL TRADE POLICY HELD BY THE ROYAL COMMISSION ON THE ECONOMIC UNION AND DEVELOPMENT PROSPECTS FOR CANADA

Ottawa, May 22, 1984

Fergus Chambers	Queen's University, Kingston
Melvin Clark	Melvin G. Clark and Associates, Ottawa
Peter Cornell	Economic Council of Canada, Ottawa
Thomas Courchene	University of Western Ontario, London
John Curtis	Institute for Research on Public Policy, Ottawa
Andrew Klymchuk	Department of Regional Industrial Expansion, Ottawa
Fred Lazar	York University, Downsview
James Melvin	University of Western Ontario, London
Pierre-Paul Proulx	Department of Regional Industrial Expansion, Ottawa
John Quinn	York University, Downsview
Edward Shaske	Ministry of Economic Development, Edmonton
Ronald Shearer	University of British Columbia, Vancouver
Randolph Spence	Department of External Affairs, Ottawa
Roderick Tremblay	University of Montreal, Montreal
Thorald Warley	University of Guelph, Guelph
John Whalley	University of Western Ontario, London, and the Royal Commission
Ronald Wonnacott	University of Western Ontario, London
Robert Wright	Department of External Affairs, Ottawa

From the Royal Commission

Honourable Donald S. Macdonald, Chairman

Staff

Victor Clarke
Lilla Connidis
Mireille Ethier
Colleen Hamilton
Anne Martin
Kenneth Norrie
Alan Nymark
Nola Silzer
David C. Smith



The Regional Impact of Tariffs

JAMES R. MELVIN

The regional consequences of trade policy — the subject of this section of the volume — is an extremely important topic, one that has not received nearly the attention it deserves. This is, however, just one of a much broader set of issues, namely, the economic consequences of spatially separated regions. The entire subject has received far too little systematic attention from economists.

It is very easy, particularly in Canada, to identify regional differences. We are all familiar with the fact that wages and per capita incomes differ from region to region. Significant differences exist in the unemployment rates among regions, and there is a good deal of evidence of significant productivity differences across the country. Migration, or the lack of it, within Canada has also received a considerable amount of attention.

Nor would anyone suggest that these regional differences have gone unnoticed by federal and provincial governments. Canada, perhaps more than any other industrialized country, has pursued policies that attempt to bring about some kind of economic equality among regions in the country. We have equalization payments, conditional and unconditional grants to provinces, programs to aid regional developments initiated by DREE and DRIE, and differences in the unemployment benefits allowed according to the region of residence.

What is frustrating for those attempting to do research in the area, however, is the fact that while the “problems” are easily identified and the government has expressed its willingness to solve these problems, very little in the way of an underlying theoretical structure has been developed to allow an evaluation of the root causes of these differences or the methods proposed to alleviate them. In many cases it seems as if policies are being formulated without knowing what the causes of these observed differences are, or if they really are problems at all.

A few examples will illustrate this view. It has been observed that persons in the Maritimes — by which I mean the four Atlantic provinces — have lower per capita incomes than residents of Ontario. The fundamental question is why this is the case. Consider the following simple model. Suppose all individuals both in Ontario and in the Maritimes receive utility from the consumption of commodities such as apples and automobiles but that they also enjoy amenities provided by nature, such as fine ocean beaches or clam digging. Now if consumers are allowed to live where they wish, and under the assumption that the Maritimes are endowed with more of these amenities than are places in Ontario, a characteristic of any equilibrium will be that residents in the Maritimes will receive lower wages than residents in Ontario. This must be the case if individuals are to enjoy the same level of utility regardless of location. If they do not, then we would expect them to move. Note that in this case, the difference in wage rates is not a problem demanding a solution, but is simply a reflection of the conditions required for equilibrium. Any attempt by federal or provincial governments to bring wage rates closer together will result in unnecessary and inefficient migration. The observation of a difference does not necessarily imply a problem.

Consider another example. Unemployment in the Maritimes tends to be higher than unemployment in most other provinces. In a simple general equilibrium model, one can show that if there are factor market distortions such as minimum wage rates, higher minimum wages would be expected to result in higher levels of unemployment. In other words, perhaps government policy may be the cause of some of the observed differences among regions. As I will argue below, tariffs also have very different effects across regions and may well result in interregional factor price differences.

The point of these examples has not been to suggest that locational differences or policies such as minimum wages or tariffs provide complete explanations of regional disparities, but to suggest that we do not know nearly enough about what gives rise to the regional differences we observe. Unless we have a clear understanding of the underlying causes of these interregional problems, it will not be surprising if government policy contributes to the problem rather than providing a solution.

The Regional Consequences of Tariffs

There has been almost no theoretical work, in Canada or elsewhere, on the regional consequences of tariffs. It is therefore necessary to begin with a simple model which investigates the regional consequences of international trade. In this framework the regional consequences of tariffs can then be investigated.¹

To discuss the regional consequences of tariffs, one must first of all have a notion of what is meant by a region. Many definitions can be

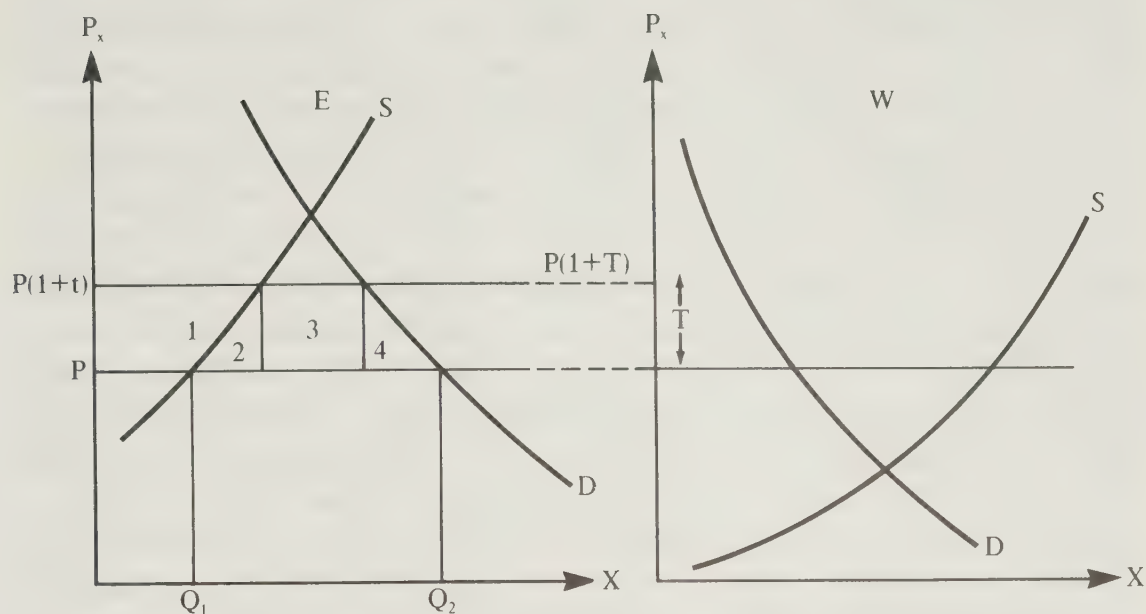
With identical tastes assumed for all consumers in the economy, this model produces the standard result that regions will export the commodity that uses their abundant factor intensively. Region E is relatively efficient in the production of Y , while region W is efficient in producing X . Initially, we assume that both regions trade with the rest of the world and for simplicity that they both face the same set of world prices. Using our standard trade results, we would observe final consumption points C_e and C_w for regions E and W , respectively. It is interesting to note from this diagram that region E will be exporting commodity Y , which may, for example, be manufactured products, while region W exports commodity X , which could be agricultural or forest products. Thus the economy as a whole is observed to import and export both commodities, so that cross-hauling exists.

Now suppose we impose a tariff. Note first that because both commodities are imported, the government has the choice of imposing a tariff on X , a tariff on Y , or a tariff on both. Further note that if, for example, there is a tariff only on X , then only residents of region E will be affected. A tariff is only effective if the commodity is being imported and thus region W bears none of the costs of this tariff. Immediately, then, we see that any tariff policy is likely to have substantial regional consequences. Although a tariff technically applies to all regions of the country, it can only affect those citizens who live in the regions importing the product on which the tariff is imposed. We have assumed to this point that transportation costs among regions prohibit the flows of these commodities interregionally. The standard general equilibrium consequences of a tariff on commodity X are shown in Figure 17-1 where a tariff moves consumers from C_e to C'_e . Figure 17-2 presents the partial equilibrium diagram for a tariff on X . In Figure 17-2 a tariff raises the price in region E from P to $P(1 + t)$, resulting in the usual welfare losses of areas 2 and 4.

While we assume that transportation costs among regions are high, they are certainly not infinite. As we continue to increase the tariff, a point is reached where the tariff is so high that it would now be cheaper to buy the commodity from the other region rather than pay the high tariff to import the product from the rest of the world. Note that if this is the case, there is a welfare loss associated with the movement C'_e to C''_e in Figure 17-1.³ This loss occurs because even with a tariff, there are gains from international trade associated with the fact that the economy as a whole still trades at prices P . With interregional trade this gain is lost, since all consumers now trade at distorted prices P_t .

In Figure 17-2, suppose the transportation cost represented by τ is just equal to the tariff rate. If there is now a small increase in the tariff, consumers in region E will observe that they can obtain the product at less cost by buying it from region W even though they must pay the transportation cost τ . The difference, however, is that now the tariff

FIGURE 17-2 Partial Equilibrium Consequences of a Tariff and Transportation Costs



revenue, equal to area 3, is not being collected by the government. Whereas with the tariff and imports from the rest of the world the loss to residents of *E* was area (2 + 4), it now becomes area (2 + 3 + 4). This shift from international trade to interregional trade has resulted in a substantial deadweight loss, a loss that does not seem to have been recognized in the tariff literature.

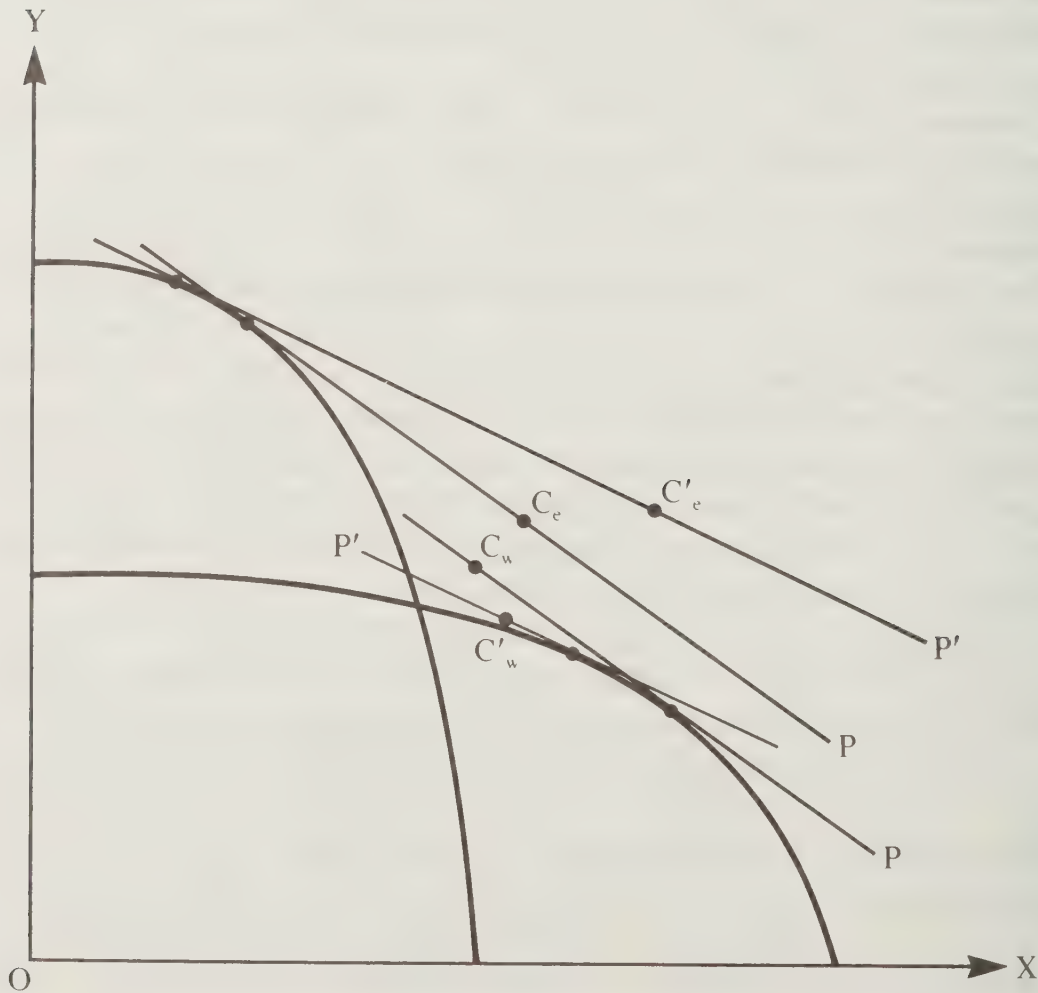
The source of this loss, of course, is easily found. If region *E* imports *X* from the rest of the world, the region is actually receiving it at world prices *P* but is charging consumers the higher price $P(1 + t)$. The government is collecting the difference between these two prices on every item that is imported and can redistribute this tariff revenue to consumers. With the shift to interregional trade, this tariff revenue is no longer collected; indeed, exactly this amount is used up in providing the transportation service, a service that is not necessary. If a tariff results in a switch from international to interregional trade, there is a loss to society equal to the cost of transporting those commodities between the regions. It may well be that the major cost of the Canadian tariff is that it generates this unnecessary transportation.

Other consequences of the tariff deserve brief mention. We have seen that a tariff, because it affects regions differently, results in different commodity prices among regions. Given the assumptions of our model, it can easily be shown that this also implies that factor prices among regions will become unequal as a consequence of the tariff. A well-known proposition from trade theory is that under certain conditions the equalization of commodity prices will equalize factor prices. Although this is not a very persuasive theorem in the international sphere, one would expect it to be quite relevant for a regional economy which has a

common currency unit and where factor movements are not seriously restricted. The corollary of factor price equalization is the proposition that if commodity prices differ, then so will factor prices. In the example presented in Figure 17-1, it can be shown that with a tariff on either X or Y (or, of course, on both), the wage rate relative to the return to capital will be less in region W , the region that is assumed to have a relatively large supply of labour. Furthermore, this will be an equilibrium condition in the sense that as long as the conditions we have assumed prevail, this wage rate difference will persist. Even factor mobility would not be expected to eliminate these differences unless it also eliminated all endowment differences among regions. In terms of this model, if regions have different endowments and if as a consequence regions have different trade patterns, then an implication of any tariff structure is that regional factor prices will be different. More specifically, any tariff will reduce the wage rate in the labour-abundant region.

Another interesting result can be derived from this model. Figure 17-3 shows the free trade situation where both regions face the price line P , where the free trade consumption points for E and W are C_e and C_w , respectively. Now assume that the relative price of Y increases to P' .

FIGURE 17-3 Effect of a Change in the Terms of Trade under Free Trade.



Consumers in region *E* will move to C'_e and will be at a higher welfare level, while consumers in region *W* will move to C'_w and will be made worse off. These welfare changes are illustrated by the fact that the respective populations consume more in region *E* but less in region *W*. Such a change in the terms of trade could be considered as sufficient reason for some sort of regional equalization payment.

But because the two regions are facing the same commodity prices, and because of the factor price equalization theorem referred to earlier, all factors of production in both regions are receiving exactly the same returns. Thus in both regions, labour is receiving the same wage and capital owners are receiving the same return. The seemingly paradoxical result is a change in the terms of trade which made one region better off and the other worse off, but yet individual citizens as factor owners have not been disadvantaged in any way by this terms-of-trade shift. The paradox is resolved by noting that the commodity price change has resulted in different factor prices than had existed in the initial equilibrium. In particular, all capital owners, whether in region *E* or region *W*, are better off than they were before the terms-of-trade change, and all workers, whether in region *E* or region *W*, are worse off than they were before. The fact that overall consumption has risen in region *E* is simply a consequence of the fact that there are relatively more capital owners there than in region *W*. Consumption in the latter has fallen because there are relatively more workers there, and the return to all workers has been reduced.

In this situation, the observed change in regional incomes is simply a consequence of the different composition of the population in the two regions. Any transfer between regions, assuming that the transfer is collected from everyone in region *E* and allocated to everyone in region *W*, will result in all individuals in region *W* being made better off than all individuals in region *E*. If it is felt that terms-of-trade changes of this kind require income redistribution, then the redistribution should be from capital to labour without regard to where the factors are located. Inter-regional transfers would not be appropriate. The point is that if we are to pursue equalization policies, it is important to understand what has generated the observed inequality, for otherwise the appropriate policies will not be pursued.

The consequences of trade liberalization for this regional economy can now be summarized. First, consider the removal of domestic tariffs. Figure 17-2 shows that a tariff will initially harm only the region that imports the good on which the tariff has been imposed. Furthermore, a tariff, as well as generating the traditional welfare costs, may produce further welfare losses if it generates interregional trade. Tariff reductions will have the reverse effects. As well as the traditional welfare gains from tariff removal, there may well be gains associated with the elimination of

wasteful interregional transportation. Note that all gains go to the region initially affected by the tariff.⁴

The removal of foreign tariffs will have consequences of quite a different kind, for this will result in changes in the terms of trade. If a foreign tariff on commodity *Y* is removed, then the domestic relative price of *Y* will rise, as shown in Figure 17-3. In this case, the region that is the exporter of the commodity will gain and the other region will suffer a welfare loss. If there are foreign tariffs on both goods, and both are removed, then which region gains will depend on which tariff is the highest, for gains or losses are determined by the terms-of-trade change that tariff removal produces.

Increasing Returns to Scale

It is difficult to discuss increasing returns to scale without becoming somewhat technical. At the same time, a significant amount of evidence suggests that returns to scale are an important policy issue for the Canadian economy, so some comments on a model incorporating returns to scale are therefore required.

Analyzing a model of increasing returns to scale is difficult because there is a range of possible outcomes, each with different welfare consequences. If there are strong increasing returns to scale in all sectors, then one can show that while there are substantial gains from trade for the world as a whole, it is not clear how these gains will be distributed. It is possible that one region or one country may actually be made worse off by trade.⁵ Perhaps a somewhat more realistic model is one in which there are increasing returns to scale in some sectors and constant returns in others.⁶ Such a situation is shown in Figure 17-4, where it is assumed that industry *X* enjoys increasing returns to scale while constant returns to scale prevail in industry *Y*. It has been assumed that factors of production exist in more or less the same proportions in the two regions but that one region is significantly larger than the other.

One of the most interesting characteristics of this model is that the price ratio line is not tangent to the production possibility curve but intersects it as shown. In less technical terms, with increasing returns to scale in industry *X*, the ratio at which the two commodities exchange in the market differs from the ratio in which they can be converted into one another through production. This is due to the fact that as factors are transferred to the increasing returns industry, there is increasingly more output.

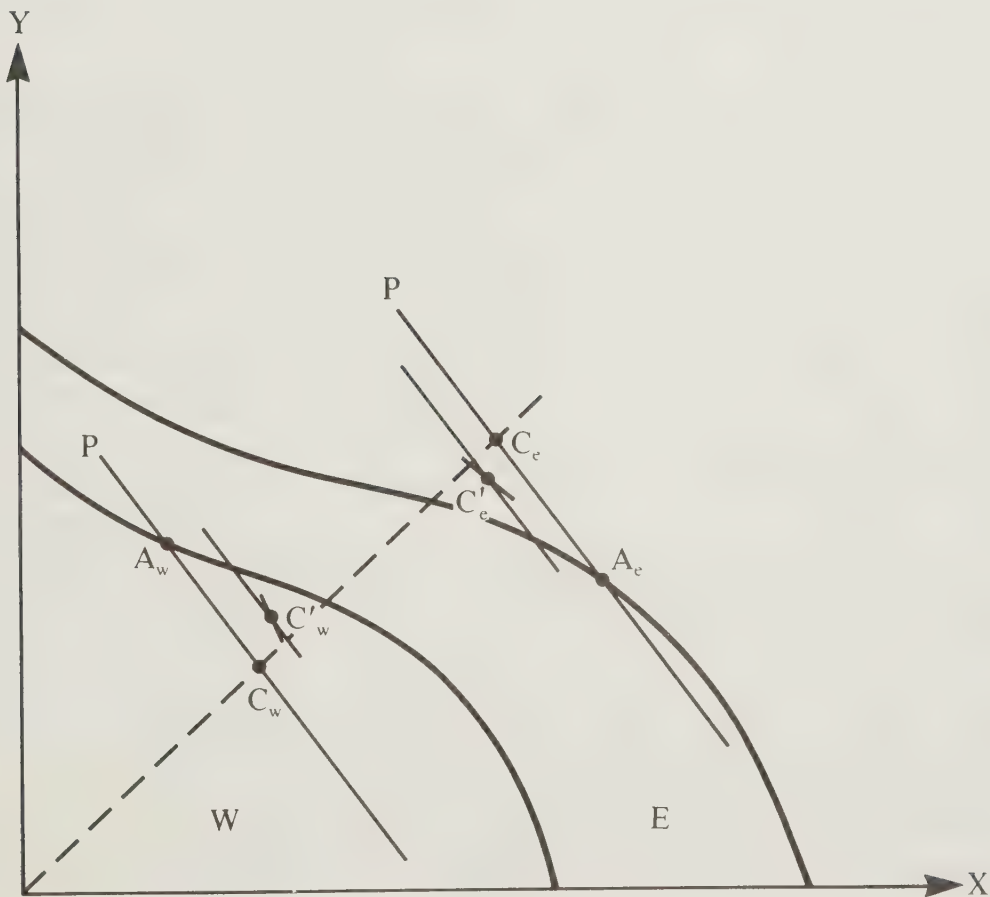
The principal consequence of the fact that prices are not tangent to the production possibility curve is the fact that in general, free trade is not the optimal strategy for either region. Both regions would increase welfare and the value of national income if the output of industry *X* were increased and the output of industry *Y* were reduced. Indeed, optimal

output will occur where the world price lines P are tangent to the two production possibility curves. While the fact that free trade is not optimal is somewhat unexpected, it is easily explained. The existence of returns to scale is very similar to a domestic distortion and in order to maximize output, some other kind of offsetting distortion is required. The optimal strategy for the regions of Figure 17-4 is a production subsidy to industry X . Such a subsidy would increase the output of the industry with increasing returns to scale and move the economy closer to the optimal production point without distorting the consumption side of the market.

Another characteristic of the model illustrated in Figure 17-4 is that in a trading situation, the large region will export the commodity produced by the industry with increasing returns to scale.⁷ In a regional context this means that if the two regions are exporting different goods, the small region will be producing “the wrong one.”

Tariffs in this model also have interesting consequences. If we impose a tariff on both commodities X and Y , and again assume significant transportation costs between the two regions, we observe that the output of industry X will rise in region W and fall in region E . In region W , consumption will move from C_w to C'_w , and in region E from C_e to C'_e . The

FIGURE 17-4 Effects of a Tariff on Industry Output with Increasing Returns to Scale



tariff results in a reduction in welfare for residents of the large region but actually increases welfare for residents of region *W*. This occurs because the tariff has resulted in an increase in the output of the industry with increasing returns to scale in the small region and therefore is moving it closer to the optimal production point.⁸

The consequences of the removal of domestic tariffs are just the reverse of those described above. If both regions are producing both goods and if they are trading in opposite directions, removing tariffs will be beneficial to the large region but harmful to the small one. Of course, there is no reason to expect the trade pattern of Figure 17-4. Both regions could, for example, export the same good. If both regions export goods from industry *Y*, which has constant returns to scale, then tariff removal could be harmful to both. If both regions export goods from industry *X*, which has increasing returns to scale, then tariff removal could be beneficial to both. It must also be emphasized that many cases other than the one shown in Figure 17-4 are also possible.

The removal of foreign tariffs will have the same terms-of-trade effects as those described in the second section of this paper. For Figure 17-4, an increase in the relative price of commodity *Y* will increase welfare for residents of region *E* but reduce welfare for consumers in region *W*. With trade patterns differing, foreign tariff removal will result in welfare changes in the opposite directions for the two regions, depending on how the terms of trade are affected.

Conclusions

Before drawing any conclusions from the above, it should be emphasized that I am not suggesting that these simple models provide all the answers to regional policy issues in Canada or elsewhere. A whole range of simplifying assumptions have been made, many of which have not been discussed. The results derived should only be seen as illustrative of the kinds of conclusions one might reach if one did a careful analysis of regional problems within a general equilibrium framework. At the same time, some of the simple conclusions do seem to conform to observations of the Canadian economy and may be of some value in policy formulation. It should be stressed, however, that theoretical research in this area is almost nonexistent and further research will undoubtedly provide us with many more insights into the important question of the effect of trade policy changes in the context of a regional economy.

The first conclusion is that tariffs have distinctly regional consequences. A tariff will only affect a region that imports the commodity, and the trade patterns of regions need not be the same.

If regional trade patterns differ, then any tariff will generate differences in factor rewards among regions. These factor price differences will persist even in the face of factor movements unless the factor

mobility is so great that it results in identical relative factor endowments among regions. At the same time it should be noted that tariffs are not the only reason for factor price differences; indeed, anything that gives rise to commodity price differences among regions will also result in factor price differences.

As well as producing the usual economic losses to consumers and producers, tariffs can generate further deadweight losses by encouraging unnecessary interregional transportation. This transportation uses up resources which could otherwise be used for producing commodities that directly yield utility. The transportation is unnecessary because the commodities could be purchased abroad at lower transportation costs. From the preceding, it follows that any kind of transportation subsidy has additional welfare costs beyond those associated with the simple distortions that such subsidies would create in the marketplace. Artificially lowering the cost of transportation by subsidies will encourage the kind of inefficient interregional trade discussed above and will result in further welfare losses. Of course, one must not confuse transportation subsidies with genuine improvements in transportation technology. Improvements in technology that lower the real costs of transportation have the same kind of welfare effects as the lowering of tariffs.

Keeping oil prices artificially low can be seen as a subsidy to the transportation system and again has welfare costs that are higher than those usually calculated. The argument here is exactly the same as for transportation subsidies.

There is another side to this argument. If negotiations to reduce tariffs are successful and if there are further increases in transportation costs due to higher fuel prices, then a natural consequence is that interregional trade will be discouraged. This will doubtless have implications for the transcontinental transportation system. In short, the lower tariffs are and the higher fuel costs are, the less need we have of an interregional transportation system. Large federal subsidies to improve the transcontinental railway system may not be advisable. Of course, this argument applies only for those commodities where foreign and domestic markets are substitutes. Products for which foreign markets are required, such as wheat, potash, wood products, and other resource-based products, will always require a domestic transportation system to move products to the foreign markets.

Finally, if increasing returns to scale are an important real-world phenomenon, then small regions may in fact be disadvantaged by tariff removal. Small regions are almost certainly underproducing products with increasing returns to scale and such regions can pull themselves up by their bootstraps by encouraging the production of these goods. Production subsidies rather than tariffs are, of course, the optimal policy tool. In this connection, one often hears the argument that while the Japanese economy does not have particularly restrictive tariffs, its many

hidden subsidies to its export industries give them significant advantages in the world market. These subsidies to industries with increasing returns to scale may be part of the explanation for the tremendous success that Japanese industry has enjoyed in the world economy.

Notes

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1. For a full discussion of this model, see Melvin (1985b).
2. In this model, trade is the result of endowment differences and the model is therefore in the Heckscher-Ohlin tradition. For regional consequences of trade caused by domestic demand differences, see Melvin (1985a).
3. For simplicity, it has been assumed that the excess demand in region *E* can be satisfied by region *W*. In general, this need not be true, in which case some trade with the rest of the world would still be required. The distribution of tariff revenues has also been ignored in this discussion.
4. Again, the consequences of the redistribution of tariff revenue are ignored. For a discussion, see Melvin (1985b).
5. For a discussion of this model, see Melvin (1969).
6. This case has been examined by Markusen and Melvin (1981).
7. For a rigorous proof, see Markusen and Melvin (1981).
8. Note that a tariff will not necessarily increase welfare. This is just one possibility.

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Regionalism and International Trade Policy

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Introduction

This paper has two objectives: to survey the literature on the regional effects of restrictive international trade policies and, in this light, to consider the possibility of a national consensus on freer international trade. The survey is not technical, does not report new research, and focusses on regions with resource-based economies.

The first section discusses the concept of a region and reviews regional patterns of economic specialization and trade. It is argued that the traditional five-region view of Canada is not appropriate for the economic analysis of the geographical effects of trade policy. A simple division between the industrial heartland and resource-based peripheries is sufficient. The second section surveys the evidence on the direct impact of restrictive international trade policies on resource-based regions and hence the gains to those regions resulting from the removal of Canadian and foreign trade barriers. Available empirical evidence supports traditional views about the cost of the tariff to resource-based regions in the short run but in the long run, given time for all economic adjustments to occur, the geographical distribution of the effects may be different. In particular, in the long run, most residents of resource-based regions may not bear a significant differential burden from restrictive international trade policy.

The third section is concerned with the long run. The market adjustment model of orthodox economists is contrasted with the cumulative causation model of sociologists (among others). The latter underlies many arguments for restrictive trade policies at the regional level and, if correct, is destructive of both national free trade policies and national economic integration. There has not been a conclusive, comparative empirical test of the two models. While there is some empirical support

for aspects of the cumulative causation model, there is a powerful body of economic analysis that explains the location of industry without resort to conspiracy theories, and there is strong evidence that market adjustments occur as predicted. However, the cumulative causation process cannot be conclusively rejected.

This is followed by a consideration of the problem in a political context. Economic regionalism is important in federal-provincial relations, and through this process provincial interests and concerns have influence on international trade policy. Economic regionalism in the federal-provincial political process may significantly restrict the range of feasible national policies. The final section draws together the discussion of political and economic factors to consider the prospects for a national consensus on free trade. The conclusion is pessimistic.

Patterns of Regional Specialization and Trade

What are the relevant “regions” of Canada for the study of international trade policy? This is not a trivial concern because, while the concept of a region is fundamental to the issues at hand, it is a concept with different meanings in different contexts, and the relevant definition for our purposes is not obvious.

What Is a Region?

Fundamentally, *region* is a geographical concept: identifying “a homogeneous segment of the earth’s surface with physical and human characteristics distinct from those of neighbouring areas” (McCann, 1982, pp. vii). The primary emphasis is on landforms, with the homogeneity of human characteristics presumed to derive from the homogeneity of physical characteristics.

It has also been argued that a region is a sociological phenomenon, defined by “a combination of social organization, culture, common behaviour, and identity” (Matthews, 1983, p. 14), and that regionalism is an important aspect of the functioning of Canadian society. It is far from clear that regions as distinctive social units are well defined empirically, and the sociological literature on Canadian regions is not extensive. However, it has produced an important theory of interregional adjustments which I will consider in the section on the regional impact of trade policy below.

Whether or not it identifies distinctive social units, in Canada, *region* is a basic administrative and governmental concept. The Canadian regions are normally defined as provinces or groups of provinces with similar interests. Thus, Canada is commonly said to have five regions — the Atlantic, Quebec, Ontario, Prairie, and Pacific regions. Regional policies are generally developed and regional statistics compiled and

published on this basis and, perhaps for this reason, standard analyses of the regional impact of trade policy use this definition (see, for example, Dauphin, 1978, pp. 85–106; Economic Council, 1975; Pinchin, 1979).

For a complex of reasons, including the fact that it is basic to the governmental structure, a *region* is also a basic political concept in Canada, and regionalism is a powerful political force (Bercuson, 1977; Hodgetts, 1977; Simeon, 1977). Geographic and political concepts of regions are not identical. Geographical criteria imply regional boundaries that are not conterminous with provincial boundaries or with the standard five regions of Canada, and they identify subregions within major political divisions that may be of considerable importance in assessing the regional effects of trade policies. However, because provincial governments have some power to implement or affect trade policies (and relevant subregional governments do not exist, or do not have significant powers in this field), and because they are the primary (but not the exclusive) vehicles for the political expression of economic regionalism, a province-based concept is the relevant concept for the assessment of the prospects for national consensus on trade policy. To a significant degree, that consensus must be a consensus of federal and provincial governments. We must assess the net impact of trade policies on provincial economies as a preliminary to assessing the probable provincial reactions.

What concept of region is relevant for the economic analysis of international trade policies? By and large, economic processes are not defined by or confined to administrative, social and political regions, and a region is not a “natural” unit in economic analysis. Indeed, economics has no agreed definition of a region; the definition is adapted by each researcher to the problem at hand (Richardson, 1979, pp. 17–29). This makes the identification of relevant regions in the present context problematic, and for economic analysis the conventional concept of five Canadian regions is probably not the most relevant.

What are normally thought of as interregional effects are, in the first instance, effects on different industries and hence on the owners of factors of production used in varying degrees of intensity in these industries. In Canada, productive activity has very pronounced geographical characteristics, which will be reviewed briefly in the next section. That discussion suggests that for the economic analysis of the spatial implications of restrictive international trade policies, it is probably sufficient to divide Canada into only two regions, the industrial heartland and the resource extracting and processing hinterland (McCann, 1982, pp. vii). The industrial heartland is located primarily in central and southwestern Ontario and southwestern Quebec, in the neighbourhood of Montreal. The regional economy is dominated by what have been called “fabricating” industries — secondary manufacturing industries, which use imported components and ubiquitous raw

materials to produce goods primarily for Canadian markets (Boisvert, 1978). By contrast, the economies of the hinterland are dominated by the extraction and processing of native natural resources, primarily for sale in world markets. While all three types of activities — resource extraction, resource processing and fabrication — occur in all of the conventional regions of Canada, the relative balance is very different and it is this balance that produces the well-known regional consequences of trade policies.

With respect to the concept of region in the analysis of international trade policy, I suggest two conclusions:

- The country is divided into geographical areas with distinctive patterns of productive activities, and particularly into an industrial heartland and a complex of resource-based peripheries; but these divisions do not correspond to provincial boundaries or to traditional concepts of a five-region Canada.

The direct effects of restrictive international trade policies bear on industries and owners of factors of production without regard to region; but because of the geographical distribution of production, there appear to be strong adverse consequences for particular regions. Thus, claims of regional discrimination appear to have substance, at least in the short run.

- The perceived interregional effects of international trade policies is one of the focusses of political economic regionalism. Indeed, one might argue that the basic significance of traditional concepts of Canadian regions for international trade policy is political, with unfortunate consequences for national unity as well as for national economic efficiency.

Regional Patterns of Production

Geographical patterns of specialization in production are well known and clearly described in standard books on the economic geography of Canada (McCann, 1982; Robinson, 1983). A concise and very useful interpretation is in Boisvert (1978; see also Economic Council of Canada, 1977). Rich statistical detail is provided in various publications of Statistics Canada (1983b, 1983c).

Table 18-1 provides a summary interpretation of the regional structure of economic activity in Canada, using familiar concepts of regions and industrial sectors. Expected interregional differences are highlighted, such as the relatively large importance of extractive activities and relatively small importance of manufacturing in the Prairie region and (to a lesser degree) in British Columbia and the Atlantic region. The relative concentration of manufacturing in Ontario and Quebec is also evident. However, the table also emphasizes similarities among the industrial

structures of the regions. In all regions, service industries are dominant, accounting for between 65 and 70 percent of the labour force (including communications, trade, finance and public administration); all regions have a significant extractive sector (including agriculture); and all regions have a substantial manufacturing sector which, with the exception of the Prairie region, employs between 15 and 24 percent of the labour force. Interregional differences, particularly with respect to the importance of manufacturing, are not as extreme as some popular assertions suggest.

However, these gross comparisons misrepresent differences in regional industrial structures in two ways that are of importance in our present context: the concepts of both manufacturing and region are inappropriate to our problem.

In the manufacturing sector, it is important to distinguish between:

- manufacturing as the processing of native natural resources, producing industrial materials largely (but not exclusively) for world markets — what Boisvert calls “transformation” activities; and
- manufacturing as “secondary manufacturing,” which is not tied to native natural resources but which uses ubiquitous industrial materials (including those produced in Canadian transformation industries) and imported components to produce consumer and capital goods (and materials and components for the production of these goods), primarily for domestic markets, often with significant tariff protection — what Boisvert calls “fabrication” activities (Boisvert, 1978; Economic Council, 1977, pp. 134–43).

While both types of manufacturing occur in all of the conventional regions of Canada, the relative balance is very different.

But the concept of region in Table 18-1 is also misleading. Fabrication activities are not evenly distributed over Ontario and Quebec but are highly concentrated in a few areas — notably the “manufacturing statistical areas” located in central and southwestern Ontario and around Montreal (Statistics Canada, 1983b). Although the classification of industries is rough and ready and there are a number of significant gaps in the published data because of the confidentiality provisions of the Statistics Act, Table 18-2 illustrates this concentration of fabrication activities. For the economic analysis of the interregional effects of restrictive international trade policies, it is a mistake simply to contrast Ontario and Quebec with the rest of Canada. Most of Ontario and Quebec are resource extraction and resource transformation regions, like most of the rest of the country. The industrial heartland is a small part of the total geographically, although a major part in terms of population and production.

TABLE 18-1 Distribution of Employment by Industrial Sector, Five Political Regions of Canada, 1981

Sector	Region				
	Canada	Ontario	Quebec	Atlantic	Prairie British Columbia
Extractive	7.1	4.6	4.7	8.6	14.7
Manufacturing	18.3	23.9	22.4	15.1	9.6
Construction	6.4	5.7	5.2	6.5	8.6
Trade and finance	30.3	29.9	29.7	29.8	31.1
Services	29.3	28.9	30.5	29.6	28.0
Public administration	7.6	7.0	7.5	10.3	7.8
Total	100.0	100.0	100.0	100.0	100.0

Source: Statistics Canada, 1981 Census of Canada, Population: Labour Force, Industry by Occupation, Cat. no. 92-923.

Definitions (Census categories):

Extractive:
Trade and Finance:
Services:

Agriculture; Forestry; Fishing and trapping; Mines, quarries and oil wells.
Transportation, communication and other utilities; Trade; Finance, insurance and real estate.
Community, business and personal services.

TABLE 18-2 Concentration of Manufacturing Activity, Golden Horseshoe of Ontario and Montreal District, 1980

	Region			
	Golden Horseshoe	Montreal	Industrial Heartland	Canada
	(percent)			
Food and Beverages	19	13	32	100
Primarily transformation activities:				
Wood industries	3	3	5	100
Paper industries	12	5	17	100
Primary metals	33	?	?	100
Non-metallic minerals	22	?	?	100
Primarily fabricating activities:				
Rubber and plastic	30	7	37	100
Leather products	21	20	40	100
Textile industries	13	?	?	100
Knitting mills	?	32	?	100
Clothing industries	16	48	63	100
Furniture	32	15	47	100
Printing and publishing	32	17	49	100
Metal fabricating	33	?	?	100
Machinery	26	8	34	100
Transportation equipment	38 ^a	12	50 ^a	100
Electrical products	31	15	46	100
Chemicals	21	15	36	100
Miscellaneous	52	13	65	100
Total	24	13	37	100
Total Shipments	(\$ billions)			
Classified	39.9	16.5	56.4	190.9
Unclassified	5.9 ^a	7.6	13.5	0
Total	45.7	24.1	69.9	190.9

Source: Statistics Canada, *Manufacturing Industries of Canada, Sub-Provincial Areas, 1980*, Cat. no. 31-209.

? To preserve confidentiality, data were not published for this category.
a. Data were not published for transportation equipment for the Oshawa statistical area; in the body of the table, I have assigned the entire “other” category to Transportation equipment, as a result, the figures for transportation equipment are an overestimate; in the total, the figures remain in the other category.

While details have changed significantly, of course, these patterns of production have been remarkably stable over time. The economic forces that produce them are powerful and persistent.

Regional Patterns of Trade

The pattern of interregional trade in Canada has not been well documented until recent years and there remain significant gaps in the data. There is considerable information about movements of some primary commodities, and three recent special surveys by Statistics Canada (for 1967, 1974 and 1979) provide a remarkable set of data on internal shipments of manufactured goods.¹ However, there is no significant information on trade in services, the dominant type of economic activity in Canada.² Fortunately for our purposes, it is the trade in manufactured goods that is important, and for this trade the data on shipments by manufacturers are very revealing.

Patterns of trade — interregional and international — reflect the pattern of specialization in production. Table 18-3 shows the gross interregional shipments of manufactured goods in 1979, and Table 18-4 the net balance of trade in manufactures among the five political regions.

TABLE 18-3 Interregional Trade in Manufactured Goods, Five Political Regions of Canada, 1979

Destination							
Origin	Atlantic	Quebec	Ontario	Prairie	British Columbia	World	Total ^a
(\$ billions)							
Atlantic	3.7	?	0.6	0.2	0.1	2.5	8.2
Quebec	1.4	22.2	7.3	1.9	0.9	7.6	44.2
Ontario	3.1	10.6	42.9	7.6	3.6	19.2	92.2
Prairie	0.2	?	1.1	10.3	1.1	1.5	16.3
British Columbia	0.1	0.3	0.5	1.3	6.3	6.1	15.5
(percentage)							
Atlantic	45.4	8.6	8.4	2.3	1.2	30.7	100
Quebec	3.3	49.3	17.0	4.5	2.1	18.8	100
Ontario	2.8	10.5	49.3	6.7	3.1	22.7	100
Prairie	1.0	6.2	7.0	64.0	6.8	10.0	100
British Columbia	0.6	1.7	3.2	8.6	39.9	40.8	100

Source: Statistics Canada, *Destination of Shipments of Manufacturers, 1979*, Cat. no. 31-530.

? Data not published for confidentiality.

a. Includes unallocated.

TABLE 18-4 Interregional Balance of Trade in Manufactured Goods, Five Political Regions of Canada, 1979

Origin	Destination				
	Atlantic	Quebec	Ontario	Prairie	British Columbia
(\$ millions)					
Atlantic		?	- 2411	16	- 6
Quebec	?		- 3210	?	654
Ontario	2411	3210		6530	3096
Prairie	- 16	?	- 6530		- 216
British Columbia	6	- 654	- 3096	216	

Source: Statistics Canada, *Destination of Shipments of Manufacturers, 1979*, Cat. no. 31-530.

? Data not published for confidentiality.

These tables provide interesting perspectives on interregional trade in manufactured goods.

- The largest concentration of shipments from manufacturers in each region is to destinations within the region.
- For the Atlantic and British Columbia regions (and probably for the resource-based regions of Ontario and Quebec), world markets are more important than interregional markets within Canada. In the case of British Columbia, the relative importance of world markets is particularly striking.
- For Ontario and Quebec (and presumably particularly for the “fabrication” regions of these provinces), the interregional markets are much more important than world markets.
- Ontario and Quebec have positive balances of trade with the rest of Canada (although Quebec has a sizable deficit in trade with Ontario), and the resource-based provinces have a deficit in trade with the central provinces.

The composition of interregional trade in manufactured goods is partly obscured by the requirements of the Statistics Act. However, some data on the bilateral trade relations between Ontario and the Atlantic, Prairie and British Columbia regions are presented in Table 18-5. The expected importance of the products of fabrication industries in the shipments of Ontario to these regions is apparent, and particularly shipments of transportation equipment, largely motor vehicles, parts and accessories.

**TABLE 18-5 Industrial Distribution of Interregional Trade of Ontario,
Trade with Atlantic, Prairie and British Columbia Regions,
1979**

Value of shipments of goods of own manufacture						
Sector	Atlantic		Prairies		British Columbia	
	From Ontario	To Ontario	From Ontario	To Ontario	From Ontario	To Ontario
	(\$ millions)					
Food and Beverages	472	199	?	407	?	494
Primarily transformation activities:						
Wood industries	?	?	?	?	?	?
Paper industries	75	?	166	?	?	?
Primary metals	?	?	?	?	122	?
Non-metallic minerals	44	?	93	?	35	?
Petroleum products	?	?	?	?	?	?
Primarily fabricating activities:						
Rubber and plastic	?	?	247	?	130	?
Leather products	18	?	?	?	33	?
Textile industries	?	38	111	?	52	?
Knitting mills	?	?	?	?	?	?
Clothing industries	67	?	122	88	?	?
Furniture	42	?	127	6	58	?
Printing and publishing	54	?	127	?	78	?
Metal fabricating	158	?	535	34	235	?
Machinery	161	?	597	32	295	?
Transportation equipment	1070	67	2620	?	1172	?
Electrical products	216	?	708	?	359	15
Chemicals	329	?	526	?	251	?
Miscellaneous	101	?	312	?	179	?
Total Shipments	3057	646	7644	1114	3590	494
Classified shipments	2807	304	6293	568	2999	15
	(Percent)					
Percent classified	92	47	82	51	84	3

Source: Statistics Canada, *Manufacturing Industries of Canada, Sub-Provincial Areas, 1980*, Cat. no. 31-209.

? Data not published.

It should be remembered that these data encompass only part of Canada's interregional trade. Not only are services excluded, but trade in such important raw materials as unrefined petroleum is not captured. The overall balance of trade among regions would be somewhat different than the balance of trade in manufactures.

The Regional Impact of Trade Policy: Direct Effects

This section has two objectives: to review on a conceptual level the reasons why restrictive international trade policies may have divergent regional effects; and to summarize the published empirical literature on these effects.

The Literature

The regional impact of Canadian tariff policy was an issue in presentations to the Rowell-Sirois Commission, particularly by the governments of the western provinces (Owram, 1982, pp. 28–9).³ While stopping short of an estimate of the regional cost of the tariff, the government of British Columbia reported detailed estimates of the province's trade with Canada and the rest of the world as empirical underpinning for its discussion of the regional effects of the tariff (British Columbia, 1938). This appears to be the first attempt at empirical analysis of the problem in Canada.

The regional consequences of a North Atlantic free trade area was one of the themes in the "Canada in the Atlantic Economy" project of the Private Planning Association of Canada in the late 1960s. Only one volume on this subject was published (Shearer, Young and Munro, 1971). Several industry studies had obvious regional implications (English, Wilkinson and Eastman, 1972, pp. 78–94), but there was no attempt to aggregate them into an overall assessment of the regional effects of restrictive trade policies.

The theme was picked up in the mid-1970s by the Economic Council of Canada in two important projects, one on trade policy, *Looking Outward: A New Trade Strategy for Canada* (1975) and one on regional disparities, *Living Together: A Study of Regional Disparities* (1977). Together with supporting research studies, they provide a detailed analysis of aspects of the regional structure of the Canadian economy,⁴ including the most comprehensive published research on the interregional effects of restrictive international trade policies. Dauphin (1978) and Pinchin (1979) estimate the regional costs of the Canadian tariff and regional gains from unilateral free trade and, in addition, Pinchin explores the interregional adjustments in production and employment in the longer run (with particular attention to the division of manufacturing activity between

Ontario and Quebec). Postner (1975) analyses the structure of international trade in terms of the relative intensity of use of different factors of production (capital, labour and natural resources) in exports and imports. This permits him to draw conclusions about gains and losses in employment of labour in the various regions under multilateral free trade.

There has been some other important work on particular provinces. The international and interprovincial trade relations of Quebec and the implications for the province of alternative national and provincial trade policies have received considerable attention, for example by Proulx (1980), Raynauld (1978), and Tremblay (1976a, 1976b, 1981). In what is perhaps the most intensive study of the trade relations of a Canadian province, Proulx, Dulude and Rabeau (1979) provide a very detailed assessment of consequences of various commercial policy options for Quebec, while providing a careful critical analysis of both the theoretical and empirical literature.

Williams (1976) provides a briefer but nonetheless intensive analysis of the impact of restrictive international trade policies on the industries of Ontario. He concludes that while Canada's restrictive international trade policies are designed to encourage higher levels of processing of native natural resources, apart from agricultural products, they have had the opposite effect in Ontario.

The tariff raises prices of products at the earlier stages (of processing) and makes it more difficult for the end-stage producers to compete with imports. . . . At high levels of Canadian and U.S. tariffs, firms located in Canada are worse off than they would be under free trade because the firms located in the United States can achieve economies of scale on the basis of market opportunities in that country alone. (p. 70)

Indeed, he concludes that the tariff does not increase manufacturing in Ontario relative to the rest of Canada (p. 73).

Blackman (1974) considers the impact on Alberta but his methodology rests on the assumption that apart from agriculture and petroleum, the structure of the provincial economy mirrors that of OECD countries. If this were a conclusion from the detailed analysis of the location and scale economics of Alberta industries, it would be very interesting. As an assumption, it is implausible.⁵

In an earlier study, Shearer, Young and Munro (1971) examine the influence of restrictive international trade policies on British Columbia. In addition to a qualitative analysis of the effect on various industrial sectors, they estimate the province's interregional and international trade flows, the price effects of tariffs, and the cash cost to residents of the province of participation in the Canadian customs union.

The literature is thus substantial but, given the important changes in trade policy in recent years, it is relatively old.

Direct Effects: Prices

In general, restrictive trade policies are not designed to have discriminatory regional effects. Why then should such results be expected to occur?

Simplifying the Problem A detailed analysis of the regional effects of possible alternative trade policies would dissolve into a complicated, perhaps incomprehensible, taxonomy. Many different cases are possible, involving different types of policies, with different structures, imposed by different jurisdictions and applicable to different sectors of Canada's international trade.

- **Jurisdictions:** Potentially, three sets of jurisdictions are involved — Canada, to a limited degree the provinces, and in various combinations, other countries.
- **Types of Policy:** In the contemporary setting, the two classical policy instruments, taxes (tariffs, subsidies) and quantitative restrictions (embargoes, quotas), have been supplemented by such devices as value-added requirements for production and subtle kinds of non-tariff barriers, ranging from administrative harassment to government procurement policies.
- **Sectors:** Such policies may be applied to various sectors of Canada's international trade. Canada may impose tariffs, quantitative restrictions, or value-added requirements on imports to Canada or exports from Canada, and these restrictions may apply to trade with all countries, particular countries, or groups of countries. Similarly, other countries, singly or in groups, may impose tariffs, quantitative restrictions, or value-added requirements on exports to Canada or imports from Canada.
- **Structure:** Moreover, any restrictive trade policy will have a structure with, for example, higher tariff rates on particular types of imports or exports than on others.

The range of possibilities is endless, and each combination of policies may have very different effects in the several regions of Canada.

Such a taxonomy would not suit the purpose of this essay. Rather, following the literature, the impediments to Canada's international trade must be taken as found. The question then is what would be the probable effects of removing Canada's restrictive international trade policies unilaterally or together with those of our major trading partner, the United States.

Relative Prices⁶ The immediate effect of restrictive international trade policies — whether financial (tariffs, subsidies) or quantitative (quotas, embargoes, non-tariff barriers), and whether imposed by Cana-

dian or foreign jurisdictions — is to alter the relative prices of goods and services in Canada.

- This is obvious in the case of tariffs on imports. They raise the prices of imported goods and services relative to the prices of other goods and services, (exportables and goods and services which are unlikely to enter into international trade, that is, “domestic goods”).
- It is also obvious in the case of taxes on exports. Given prices in world markets, taxes on Canadian exports (whether imposed in Canada or abroad) will lower the net prices received by Canadian producers of these products and probably the prices paid for them by Canadian purchasers.
- However, it also applies in cases of quantitative restrictions. While taxes on imports and exports change prices directly, quantitative restrictions alter the market situation for domestic producers, restricting foreign supplies in the market in the case of import controls and hence permitting an increase in price, or forcing the sale of domestic output in the domestic market in the case of export controls and hence inducing a fall in price. Quantitative restrictions change relative prices indirectly.⁷

Thus, restrictive trade policies alter the internal terms of trade, raising the prices of importable goods and services relative to the prices of exportable and domestic goods and services, without altering the external terms of trade, the relative prices of comparable goods in world markets. Relative prices in Canada are distorted. They do not reflect relative prices in world markets, and hence do not reflect the true potential relative costs of the various goods and services to the Canadian economy.

The important point for our purposes is that, because of restrictive international trade policies in Canada and abroad, a given export good produced in Canada — and hence the total incomes of the owners of the factors which produce it — will purchase more other goods in world markets than it will in Canadian markets.⁸

Quantification of Price Effects The first step in assessing the regional economic effects of restrictive trade policies is to estimate their impact on relative prices.

Some studies of Canadian trade policies attempt to measure price differentials directly (Young, 1957; Shearer, 1971a,b). This is a very expensive type of research if it is to be comprehensive, including all major items in international trade. Neither Young nor Shearer achieve broad coverage; their estimated price effects must be regarded as indicative only. In any case, the research is too old for the estimated price differentials to be relevant today.

The alternative to direct estimation of price differentials is to infer them from tariff rates, on the assumption that prices will adjust to be approximately equal to world prices (normally, U.S. prices) plus the tariff. The average price differential by industrial sector is assumed to be a weighted average of applicable tariff rates. The very complexity of tariff schedules makes the direct calculation of such an average difficult, and some of the complexities (particularly “end-use,” “class-or-kind,” and “draw-back” provisions), which have direct regional implications, involve administrative decisions, which cannot be inferred from the published tariff schedules alone. However, some variant on this approach underlies most Canadian empirical work on the effects of trade restrictions (for example, Dauphin, 1978; Pinchin, 1979; Cox and Harris, 1983; Williams, 1978; Postner, 1975). Frequently price differentials are inferred from the ratio of duty paid to the value of imports (Dauphin, 1978, p. 42).⁹

Obviously, this approach to quantifying the price effects of restrictive trade policies cannot be applied when the restrictions are not tariffs. Some studies do not address this problem directly, focussing on the tariff per se (Pinchin, 1979; Williams, 1978). One of the more interesting features of the Dauphin study is his attempt to estimate a price differential equivalent for major non-tariff barriers. He calculates the cost equivalent of major government subsidy programs and estimates price differentials for quantitative restrictions on the basis of differences between domestic costs of production and unit costs of imports of comparable goods (Dauphin, 1978, pp. 125–85). The Dauphin results are very instructive in a number of ways, and they suggest the vital importance of a more comprehensive approach to the analysis of the price equivalent of restrictive trade policies. In general, however, the price differentials implied by quantitative restrictions on international trade are poorly documented.

For present purposes, there is a further problem. The most recent comprehensive studies, which attempt to quantify price differentials, were published in 1978 and 1979 and are based on data several years older. In the meantime, there have been important changes in trade policies, including some significant reductions in tariff rates, as a result of the Tokyo Round of negotiations under the General Agreement on Tariffs and Trade (GATT), and significant intensification of some quantitative barriers. The net effect on relative prices is not obvious and has not been documented.

Direct Effects: Consumption, Production, Employment

Changes in relative prices facing consumers and producers in Canada set up a complex pattern of rewards and penalties — implicit subsidies and

implicit taxes — the detailed incidence of which depends on the type and intensity of the restrictive trade policies. In general:

- Canadian purchasers of importable goods and services (imports and Canadian-produced substitutes for imports) are penalized. They pay higher than world prices whether they are consumers (effectively reducing the purchasing power of their incomes) or producers who intend to use these commodities as inputs into other production processes.
- Canadian producers of substitutes for imports are rewarded. They receive higher than world prices for their products, and production should increase. Increased demands for the factors used in the production of these goods will put upward pressure on incomes of some or all of them, and will attract factors from other industries. The movement of factors may restrain the rise in factor incomes.
- Canadian purchasers of exportable goods and services are rewarded. If there are export restrictions, they obtain these commodities at less than world prices and, in any case, prices of exportables will fall relative to importables. Lower prices provide an indirect subsidy to producers of other products who use the exportables as inputs, and create the possibility of wasteful use of basic resources (Pearse, 1976, p. 312).
- Producers of exportable goods and services are penalized. If there are restrictions on exports, they receive less than world prices for their products, and, in any case, the relative rise in import prices reduces the purchasing of their incomes.

The distortion of relative prices is national in scope. However, the rewards and penalties will have an interregional dimension if consumers located in particular regions have relatively strong preferences for restricted imported commodities or, more importantly, if protected (or penalized) producers are located predominantly in some regions. While it is obviously an oversimplification, as demonstrated in the section on regional patterns of production above, geographically the Canadian economy can be characterized as a core of fabrication activity in central and southwestern Ontario and southwestern Quebec, surrounded by peripheries of resource extraction and resource processing. By and large, Canadian restrictive international trade policies raise prices of highly manufactured goods relative to prices of natural resources, either in their raw state or with low levels of processing. As a result, the main protective effects — the rewards — are felt in the industrial heartland and the penalties are most evident in the peripheral regions. Historically, this has been the most directly apparent and politically sensitive consequence of Canadian tariff policies, the folklore of the tariff. What is the empirical evidence?

Canadian Tariffs Detailed evidence on industrial adjustments in regional economies is limited. As one example, Shearer, Young, and Munro (1971) analyse the economy of British Columbia of the mid-1960s and attempt to deduce from largely qualitative evidence the probable impact of multilateral free trade on each of the province's major industries. They identify a small protected manufacturing sector in the provincial economy, employing less than 2 percent of the employed labour force, only a portion of which seemed vulnerable to the removal of Canadian tariffs.¹⁰

Proulx, Dulude and Rabeau (1979) provide a more intensive analysis for Quebec, and Williams (1976) for Ontario. I will not review their findings, except to note their emphasis on the gains for local manufacturers from free access to the U.S. market, as opposed to the possible losses from removal of Canadian protection in the event of a North American free trade area. Each of these studies is a partial analysis of the problem, which does not consider the indirect effects of adjustments elsewhere in the economy.

Several studies have considered the vulnerability of industries to free trade on a national level. The traditional results are represented in the studies by Postner (1975) and Pinchin (1979). Postner (1975) estimates the impact on production and employment in individual industries of a balanced expansion in Canadian imports and exports under multilateral free trade, based on the Canadian input-output table for 1961 and assumptions about price elasticities of imports and exports. The results are not surprising: the industries that appear to be most dependent on tariff protection are the familiar secondary manufacturing industries concentrated in the industrial heartland. His 20 most vulnerable industries include several fabric and textile industries, leather-related industries, rubber-related industries, electrical products, hardware, machinery, pharmaceuticals, and so on. By contrast, his 20 most expansive industries are dominantly in resource processing but also include distilleries, fertilizers, aircraft and parts, and explosives and ammunition. The analysis suggests increases in employment in the Atlantic and Pacific regions (and in the resource-intensive industries of Quebec), and contractions in the old-line manufacturing industries in Ontario and Quebec. As an analysis of adjustments within the manufacturing sector, it suffers seriously from the rigid assumptions of input-output methodology about the production process. In particular, it ignores scale economies and related aspects of industrial structure, issues that are prominent in current discussions of Canada's international trade.

Pinchin develops a detailed analysis of production and trade patterns (international and interregional) by industry and by region for manufacturing industries. His conclusions are broadly similar to Postner's.

The U.S. Market There is a new literature on the impact of restrictive international trade policies, which grows out of the pioneering research of Wonnacott and Wonnacott (1967) and Eastman and Stykolt (1967), and it suggests somewhat different conclusions about the impact of free trade on the manufacturing activity of the industrial heartland and hence, indirectly, about interregional aspects of trade policies. The Wonnacotts conclude that the major consequence of the restrictive international trade policies of Canada and the United States is to confine Canadian manufacturers to a very small market, in which they cannot achieve low costs through scale economies.

Removal of Canadian tariffs (unilateral free trade) would reduce the cost of manufactured goods to the resource-based regions; removal of the U.S. tariff would significantly increase the productivity of resources used in Canadian manufacturing as access to the U.S. market permitted rationalization of production (increased specialization) to take advantage of potential economies of scale.

As Shearer (1971a,b) notes, the implication is that both the resource-based peripheries and the industrial heartland will gain from free trade — the peripheries from the removal of Canadian tariffs and the heartland from the removal of U.S. tariffs. The gains to the heartland are probably quantitatively greater.

More recent studies have significantly extended the Wonnacott results, explicitly modelling interindustry relations through commodity markets. Thus, Cox and Harris (1983) provide a very different picture of the adjustment to free trade from the traditional view. With multilateral free trade, most categories of manufacturing industries show increases in gross output (exceptions are the classic “sick men,” leather, furniture and fixtures, machinery, and miscellaneous manufacturing); but several show reductions in value-added (including, in addition to the above, food and beverage, knitting mills, wood products, electrical products, and tobacco).

Direct Effects: Conclusions

The short-run direct effects of restrictive international trade policies on the resource-based regions of Canada have several components:

- a restriction of consumption of imported goods, with a resulting direct loss of consumer well-being;
- a restriction of resource-based exports, with a resulting loss of real income;
- expansion of protected manufacturing activity within the region, with a resulting loss of efficiency in production through misallocation of productive resources; and

- a transfer payment from consumers and producers within the region to producers of protected products in the industrial heartland (and, to a lesser extent, to the federal government in import taxes).

The empirical studies agree that for the resource-based regions the last of the four effects appears to be of overwhelming importance. If the Cox-Harris results are correct, it may not result in an increase in incomes in the industrial heartland: the transfer vanishes in inefficient productive techniques. Recently, Melvin (1983) also adds the suggestion that they may partly vanish in the cost of unnecessary interregional transportation of protected goods.

How large are the transfers in question? It is difficult to know how much weight to give to the precise calculations of the different studies, particularly in the context of the 1980s. As a general indication of orders of magnitude, however, Dauphin suggests increases in real income as a result of unilateral free trade in the order of: British Columbia 3.8 percent, Prairies 3.9 to 4.8 percent, and Atlantic 4.4 to 4.5 percent. By contrast, he finds that "per capita income in Ontario and Quebec would not be much affected," although he does estimate increases of 0.9 to 1.0 percent and 0.5 to 0.7 percent, respectively, (pp. 104–105). Pinchin's estimates of the interregional income transfers with unilateral free trade are much smaller, with a small negative effect on Ontario and Quebec. Both studies are out of date. However, given the inherent problems of estimating price differentials and the crudeness of the estimates of interregional trade, I suspect that both Dauphin and Pinchin underestimate the direct regional effects of Canada's restrictive international trade policies. Moreover, neither study fully captures the reorganization effects, which play such an important role in current thinking. The true cost of restrictive international trade policies to the regions is not known.

The Regional Impact of Trade Policy: The Long Run

The literature surveyed in the previous section provides strong evidence that Canada's resource-based regions bear heavy costs as a result of Canada's restrictive international trade policies. There would be substantial gains from unilateral free trade. Recent research suggests a much more complicated situation in the manufacturing industries of the industrial heartland. It is possible that the gains from industrial reorganization to take advantage of scale economies would actually increase incomes in the centre relative to the resource-based peripheries under multilateral free trade. Perhaps the relevant conclusion is that there would probably be income gains in all regions, but not necessarily in the same degree. However, these studies focus on the direct effect of the trade policies. Given time, regional economies will undergo further

adjustments, and the long-run consequences of restrictive trade policies may be rather different.

There is little empirical literature concerned with the long-run regional consequences of trade policies in Canada, but there is a substantial literature on the more general processes of interregional economic adjustment, which is relevant. This literature is diffuse, but without doing too much violence to individual contributions, two very different analytical traditions can be identified in it which I will call the market adjustment model and the cumulative causation model. In general, the facts about the industrial structures of regional economies, regional income, employment and growth disparities, and patterns of inter-regional economic relationships (capital flows, trade and migration) are not in dispute. However, the two models draw very different conclusions about the causes and effects of these interregional economic relationships and about the interregional adjustment processes.

For present purposes, the important point is that they have very different implications for international trade policies. To the extent that the market adjustment model is correct, the long-run policy objective should be to maximize the rent from natural resources. For this, free trade appears to be the best policy. The policy debate can then shift to the division of the rent between federal and provincial governments (to the extent that the resources have not been alienated), or between Canadian and foreign landlords. However, to the extent that the cumulative causation model is correct, the argument for free trade is weakened at both the national and regional levels. If this model is politically persuasive, it will be very difficult, perhaps impossible, to achieve a national consensus on a policy of freer international trade.

The Cumulative Causation Model

The analytical tradition, which I call the cumulative causation model, focusses on a range of effects that receives little attention in orthodox economics — namely, the interaction between social, cultural and economic forces, including the development of attitudes and behaviour patterns among workers, business persons, and government officials. It is difficult to do justice to a complex body of analysis in brief compass. Moreover, in order to focus on what I regard as the central points, I am consciously grouping together arguments and theories, which are different in many respects, and whose proponents might not feel comfortable in the same academic category. The intellectual roots are diverse. At one extreme are roots in Marxist theory and an interpretation of the well-known staples of theory of Canadian economic development;¹¹ at the other extreme, a simple adaptation of the venerable (and frequently misinterpreted) concept of an infant industry, which has played such an important role in discussions of tariff policy over the years (Caves and

Jones, 1973, pp. 260–61, 556–57), and related concepts from regional science, for example, growth poles and agglomeration economies (Richardson, 1979, pp. 159–78). The primary analytical purpose of most of the contemporary Canadian literature in this tradition is to explain underdevelopment, and particularly the underdevelopment of the Atlantic region. However, the model is also applied to other resource-based regions, particularly the western provinces.¹² The tariff as such is only a marginal element in much of this literature, but if the theory is valid it has important implications for the problem at hand.

Exploitation and Underdevelopment In the extreme version of this model, regional underdevelopment is a variant of imperialism. Peripheral regions are exploited by the industrial centre, serving as markets for manufactured goods, sources of raw materials, and a storage facility for the reserve army of unemployed (or underemployed) workers. In periods of economic expansion the centre draws materials and labour from the peripheries; in periods of contraction, the centre stops buying raw materials and sends the surplus labourers home. Economic development does not occur in the peripheral region. Economic activity in the region plays only a supporting role to economic activity in the centre.

Economic underdevelopment is not simply a matter of the level of income per capita. Indeed, a region (such as the Canadian West) can have a relatively high level of income and yet be underdeveloped. The level of development in a region depends on the strength of the secondary manufacturing sector, and the lack of secondary manufacturing industry in resource-based regions is not to be explained by comparative advantage or location economics. The argument implicitly invokes Keynes' famous assertion that "most modern processes of mass production can be performed in most countries and climates with almost equal efficiency" (cited in Robinson, 1956, p. 363), extending it to include "most regions within any country." Comparative advantage is a dynamic phenomenon, which can be developed through investment and learning, not a static phenomenon determined by factor endowments and location (Robinson, 1956). Thus, there is a strong suggestion that orthodox economic theories cannot explain the lack of manufacturing activity in the resource-based regions. It is also argued that to ascribe underdevelopment to a lack of entrepreneurship is to beg the question. Local entrepreneurial talent is available but deliberately redirected or stifled. Local businessmen are but agents (implicit or explicit) of firms located elsewhere, implementing decisions taken elsewhere that are not in the region's interest but in the interest of "multinational corporations or national monopolies" (Matthews, 1983, p. 43). Switching the analytical model slightly, growth poles are not established in peripheral regions because the location of industry is essentially an exercise of

power, and it is in the interest of the powerful firms to centralize their operations in the industrial heartland (Clement, 1978). Why this is in the interests of the corporations is not explained. The further benefits of industrial agglomeration are thus also centred in the heartland. Regional disparities in development are “not natural but created” (Matthews, 1983, p. 43).

The interaction between the economic structure and social forces is crucial and cumulative. The economic structure has a deep and lasting influence “at the levels of consciousness and identity” (Matthews, 1983, p. 83), which in turn affect attitudes and behaviour, reinforcing the underdevelopment. Thus, the economic structure creates a culture of underdevelopment, which in turn stifles development and perpetuates the economic structure. For development to occur, some dramatic event must break the vicious circle.

While often couched in different terms, this is closely related to the frequently advanced argument for special subsidies or protection to particular industries, such as high-tech industries at the national level (Britton and Gilmour, 1978). This is a variant on the infant industry argument, which has a long history in discussion of trade policy (Caves and Jones, 1973, pp. 260–61, 556–57). It is also related to the even stronger argument that comparative advantage need not be a static phenomenon but is something which can be created through investment in education, technical training, and learning-by-doing (Robinson, 1956).

The Tariff and Regional Development Restrictive international trade policies at the national level appear as instruments of imperialism in this analysis. Historically, the National Policy destroyed the industrial base of the Atlantic region (Acheson, 1977) and prevented the development of such a base in the West (Phillips, 1977), and today national policies reinforce the pattern. The economies of both eastern Canada and western Canada were deliberately shaped “to serve as the economic hinterland” (Matthews, 1983, p. 102).

A policy of removing tariffs does not seem to be a prescription of the analysis, however. Restrictive trade policies may have been an instrument of underdevelopment, but removal of the cause will not break the vicious circle of underdevelopment and reverse the cumulative process. Removal of tariffs at the national level, or, indeed, free international trade, would simply substitute a broader international imperialism, through the instrumentality of the multinational corporation, for the present sort. Alternatively, because interregional economic relationships are primarily an exercise of corporate power, if tariffs do not serve as the instrument of exploitation of the regions, some other device will be substituted to the same effect. The policy conclusion seems to be that regional economies should be deliberately developed and converted from resource hinterlands (Clement, 1978, p. 100) exporting their sur-

pluses to the industrialized heartland to industrialized economies in their own rights. This implies regional planning and regional development policies, supported by subsidies and protection at the regional level — a policy of “balkanized mercantilism.”

Migration and Trade It is important to note the important roles of migration and trade in the cumulative causation model. Migration provides a balance wheel for industrial development at the centre. It is part of the process that keeps regional industries underdeveloped and, at least in the Atlantic region, keeps regional incomes low. It is not an aspect of the competitive market adjusting to the realities of location economics and economic incentives. It makes matters worse, not better.

Trade similarly accentuates the pattern of regional dependency. Extraction and sale of natural resources are not income maximizing patterns of economic activity, but are aspects of the pattern of exploitation of the periphery by the centre. The message is very different from the message of the market model.

The Market Adjustment Model

The long-run market adjustment model stands on a very different footing and reaches very different policy conclusions from the cumulative causation model. The basic facts about interregional differences in economic structure, disparities in income and employment opportunities, and interregional economic relationships are not in dispute. What is in dispute is the explanation for these facts in the long run and what their implications are.

Economic Structure The first issue is the explanation for the contrast in economic structure between the centre and the peripheries. In the cumulative causation model, the explanation is in terms of the exercise of corporate power to advance the unspecified interests of multinational corporations and the resulting exploitation of the resource and population bases of the regions. In the market adjustment model, there is both a proximate and a basic explanation for the contrast in economic structures.

The proximate explanation derives from the neoclassical theory of international trade, emphasizing differences in regional endowments with factors of production and differences in industrial requirements for factors of production. Regions with relatively abundant supplies of labour under free market conditions will specialize in the production of relatively labour-intensive goods; regions with relatively abundant supplies of particular natural resources will specialize in the production of goods that are relatively intensive in those resources.

Interregional Mobility An explanation for the economic structure that rests on comparative advantage with fixed endowments of factors of production is at once superficial and short-sighted. Supplies of some factors of production are not fixed for long. While natural resources are geographically immobile (except as goods in trade), capital and labour are mobile and can be presumed to move interregionally (and, at least in the case of capital, internationally) in search of the highest rate of return. In the long run, the flow of factors to higher rates of return should tend to equalize the returns to the mobile factors in all regions.

What, then, determines the interregional distribution of industry? The answer is to be found in an important and powerful body of economic analysis called “location economics.” This is not the place to explore the economics of the location of industry (for a brief survey, see Richardson 1979, pp. 53–81). Suffice it to say that the essential problem is to minimize transportation costs in a variety of dimensions, including not only the transportation of all kinds of raw materials and components to the processing plant but also of the product to market. In addition, particular locations may have attributes of particular importance for the processing of certain products (for example, climate may be important to a major university or research institute); and both the efficient exchange of information and the benefits of a large, trained, and disciplined labour force may create agglomeration effects which lead firms and industries to cluster together.

In other words, the spatial distribution of production in Canada is not random, or the result of conspiracies and exercises of power. It has a rational explanation in the profit-maximizing behaviour of firms, as Munro (1971) argues in his detailed analysis of the manufacturing sector of the British Columbia economy. Mobile factors of production will be attracted to optimum locations for industry.

This is an important conclusion. The literature suggests that Canada’s restrictive international trade policies will depress incomes in peripheral regions. However, in the long run:

- If factors move to locations where they obtain the greatest returns, because of the change in the balance of supply and demand for these factors in the regions, the returns to geographically mobile factors will be equalized in all regions. In this sense, the owners of mobile factors will not bear regionally specific costs of restrictive international trade policies.
- The returns to geographically immobile factors will not be equalized, and the owners of these factors will bear the full regionally specific costs of restrictive international trade policies.

It should be noted that the common assumption that free trade will benefit resource-based regions and hence attract people to these regions may be wrong. If the Cox-Harris conclusions are correct, free trade may

attract people and capital from the resource-based regions to the industrial heartland. Politically, this may be an important conclusion.

Empirical Literature on Mobility What is known about the geographical mobility of factors of production in Canada?

The term capital is used in two senses. In a financial sense, capital is perfectly fluid, responding sensitively to differences in expected yield, with due regard to risk. In a physical sense, capital may or may not be mobile. Some investment decisions are almost irreversible, and capital goods essentially become part of the physical environment; others (trucks, oil rigs) are movable at low cost. The adjustment process may be rapid or slow, but, in the long run, (apart from irreversible investments) capital should be regarded as perfectly mobile internationally and inter-regionally.

The case of labour is much more complicated. As has been noted many times, the decision to migrate is not simply an economic decision. Yet, there is abundant evidence that economic opportunities, including relative earning potential, are important in explaining migration flows;¹³ as Grant and Vanderkamp note:

The overall impression is one of a labour market adjustment process that works in the right direction; but the adjustment is rather sluggish and by no means a caricature of frictionless market adjustment. (p. 88)

A major exception to the assumption of a reasonably high degree of interregional mobility of labour relates to the province of Quebec.

The main regional burden of restrictive international trade policies will be borne by the owners of immobile factors: workers who, for one reason or another, do not respond to market incentives, and owners of natural resources. Outside of the agricultural sector, to a substantial extent, the owners are provincial governments.

Conclusions: The Long-Term Adjustment

The market adjustment and the cumulative causation models provide very different perspectives on the long-term implications of free trade for Canada's regional economies. In the one, free trade appears as a rent-maximizing strategy for immobile labour and natural resources. In the other, the implications are less clear, but probably destructive of regional industrialization. Which model is correct?

There is a powerful body of economic analysis that provides plausible explanations for the location of most industries. Moreover, the available empirical evidence on labour migration seems consistent with the market adjustment model. However, patterns of migration are not inconsistent with the cumulative causation model; and there are a number of industries that location theorists classify as "footloose," for which

traditional locational factors are apparently not important. Moreover, it is difficult to point to economic research that effectively deals with the issues of social causation raised by the alternative analysis.

I would argue that the balance of probabilities suggests that cumulative causation is but a small factor in explaining the regional structure of the Canadian economy and the probable long-run consequences of free trade. However, I cannot point to any literature that effectively demonstrates this.

Regionalism and Economic Policy

It is a trite but nonetheless basic observation about economic policy in Canada that even the simplest, aggregate policy measures come wrapped in, or quickly become entangled in, a complex web of economic regionalism. In part, economic regionalism is a state of mind, an emotional mixture of pride of place, envy, and disdain, nourished by a folklore of real or imagined historical wrongs. However, economic regionalism does not simply reflect anachronistic conflicts, confusions and errors. It is also rooted in substantive diversities of regional economic interests. As I have noted, the basic resource endowment and the nature of economic activity differ widely among parts of the country and, as a result, most national economic policies have significantly different repercussions in different localities. In some cases, this is intentional and favourable to regional interests, but often the differential consequences are an unfavourable (but not necessarily unanticipated) by-product of measures designed to achieve other national objectives. It is these policies that provoke the strongest regional reactions.

Building on the emotional and the economic, the sticky part of the web of regionalism is political. It has various manifestations. Divergent regional interests are reflected in patterns of representation in the House of Commons and in formal and informal national debates on national issues. However, the strongest political expression in recent years has been in the attitudes, negotiating positions, policies, and actions of provincial governments. Trade and commerce is a field of exclusive federal government jurisdiction, not a shared power, under the Canadian Constitution. It can be argued therefore that provincial governments have no role to play in the formation of trade policies, whether or not they have regional effects. However, it is important to note that provincial governments have powers that impinge on, and potentially limit, the federal power over some important aspects of international trade; and perhaps more important are the political realities. The regional economic effects of national policies are prominent on the agendas of provincial governments in formal and informal federal-provincial discussions and, as a result, politically the federal government does not always have an unchallenged free hand, even in this area of its constitutional

responsibility. This poses a fundamental problem in considering alternatives for Canada's international trade policies, and in the formulation of trade policy in the national interest.

Provincial Governments and Trade Policy

I noted above that in the first instance restrictive trade policies change the relative prices of goods and services in Canada, either directly (as through tariffs) or indirectly by changing the market conditions under which the products are bought and sold (as through quotas or other non-tariff barriers). Prices of importable goods are increased relative to prices of exportable goods. It is the change in relative prices that induces the more profound consequences of restrictive international trade policies.

However, in this sense, restrictive international trade policies are not unique. The same effects on relative prices, production and consumption can be achieved by other taxes and direct subsidies and other penalties, or rewards, for the production or consumption of particular goods and services or for their production in particular locations. Such penalties and rewards are commonplace in Canada. Examples include direct subsidies or special taxation provisions for the location of production in particular areas; subsidization or regulation of transportation charges; marketing board arrangements governing pricing and production of agricultural goods; restrictions on production of natural resources justified by conservation policies; and so on. In each case, the policies have another rationale. However, they can have the same effects as restrictive international trade policies and may be so considered in broader international forums.

What is important in our present context is that these policies can often be implemented by provincial governments or, if federal policies, influenced directly or indirectly by provincial governments (and hence become "quasi-provincial" policies); and their regional consequences may be contrary to those normally ascribed to Canada's international trade policies. This means that the interregional consequences of restrictive international trade policies are far more complicated than is assumed in popular discussions, and a full analysis must go well beyond the traditional national instruments of policy, and include major provincial or quasi-provincial measures.¹⁴

Powers of Provincial Governments

The Trade and Commerce clause of the British North America Act, as interpreted by the courts, assigns exclusive jurisdiction over international and interprovincial trade to the federal government. However, the constitution also assigns to provincial governments jurisdiction over

“property and civil rights in the province,” “the management and sale of the public lands . . . and of the timber and wood thereon,” proprietary rights to “all lands, minerals and royalties” in the province, unless they have been alienated or otherwise reserved to the federal government, and shared powers over agriculture and direct taxation. In the present context, this constitutional division of powers is important for three reasons:

- It gives to provincial governments the legal authority to implement a variety of taxation, royalty, subsidy, and regulatory policies that affect the use and pricing of the products of natural resources.¹⁵
- These powers have the potential to affect international and interprovincial trade and, in most cases, cannot be effectively used without complementary federal trade policies.
- Politically, if not legally, this establishes a direct provincial government interest in various federal policies, including international trade policies that affect the ability of the province to make full and effective use of its constitutional powers over natural resources.

The constitutional foundation of provincial power is important. Perhaps more important, however, is the apparent intensification in recent years of the attitude that provincial governments should play a more active role in the formulation and implementation of industrial policies, and that the powers over agriculture and natural resources ought to be exercised to promote industrialization.

This is not the place to pursue this topic in depth. The interaction between federal and provincial governments on industrial policies, and the resulting essential role of the provincial governments (actual and potential) in the formulation and implementation of international trade policy, can perhaps be best illustrated with reference to three (admittedly extreme) cases: agriculture, energy, and timber. These three cases also serve to illustrate the essential ambiguity of the concept of international trade policy and the sensitivity of the assessment of the regional effects of restrictive international trade policies on the definition of international trade policy.

Agriculture Government intervention in agriculture is both comprehensive and complex, involving detailed interaction between federal and provincial governments. This intervention, its history, objectives, and effects are well documented (see, for example, Economic Council of Canada 1981, p. 51–68). The industry is comprised of sectors that have very pronounced regional concentrations and widely different market orientations. Some produce for local markets, some for regional or national markets, and some for international markets. In this sense, it is a mirror for the regionalization of the Canadian economy.

The legal history of government intervention in agriculture is an instructive example of the interaction between provincial and federal governments in the search for constitutional forms of federal-provincial cooperation on solutions to essentially regional issues (Economic Council of Canada 1979, p. 18–19; Baggaley, 1981). Regardless of the form of intervention or the jurisdiction involved, most policies involve the maintenance of prices above market-clearing levels through the regulation of marketing and production (although direct or implicit subsidies are also important, particularly the Crow's Nest Pass freight rates and successor arrangements). Clearly, whether the agricultural policies are provincial or federal, they will only succeed in raising prices in domestic markets if supported by restrictive international trade policies. As a result, the agricultural sector of the Canadian tariff is among the most complex; and there is a significant degree of protection for agricultural production for the domestic market, directly in the tariff and indirectly in subsidy and subsidy-like programs at both levels of government.¹⁶

It is not surprising that agricultural industries producing for the domestic market under marketing board arrangements are protected. However, what may be surprising is that if we accept a broad definition of restrictive international trade policy, one of the heavily protected sectors in agriculture is wheat production, which is one of Canada's major region-specific export industries. Thus, among Dauphin's most striking results is his estimate of the protection afforded to wheat production (in excess of 25 percent of the price of wheat in 1970) through a variety of subsidy and subsidy-like programs (Dauphin, 1978, pp. 161–72).¹⁷ The abolition of the Crow rates (but not of the full Crow subsidy) will reduce the magnitude of this protection, but the effect of subsidies to grain production is to reduce very significantly the apparent penalty to wheat production implied by the tariff on other goods, and hence the regional burden of the Canadian tariff.

What are the implications of this high degree of protection in the agricultural sector?

- On a conceptual level, it puts into sharp relief the meaning of the term “international trade policy.” Does it mean only those federal government policies that are directly concerned with the regulation of international trade, or does it include other policies, whether federal or provincial, that have similar economic effects? Specifically, does free trade encompass the dismantling of agricultural marketing and transportation subsidy programs?
- On an analytical level, it means that the calculation of the interregional burden of restrictive international trade policies is sensitive to the definition of “international trade policy.” If all major subsidy and subsidy-like programs are considered to be international trade policies, agriculture — including the major western export agricultural

sector — is highly protected, and the regional gains from free trade will be very different from the traditional view.¹⁸

- On a political level, it means that regional support for a truly comprehensive free trade policy cannot be assumed. In particular, a proposal for free trade in agricultural goods would run head-on into the barrier of economic regionalism, as well as normal industry resistance. Such a concept of free trade is not a political possibility in the foreseeable future.

Energy The energy sector is very complex, encompassing a wide range of industries with widely different forms of federal and provincial intervention. Recent controversies surrounding the production, export, and pricing of energy — petroleum, natural gas, water, electricity, uranium, and coal — have been intense, and the vast literature spawned by these controversies raises constitutional, political, and moral, as well as economic issues.¹⁹ It is not my intention to survey this literature, nor indeed to discuss all aspects of the topic that potentially bear on the problem at hand. Rather, I simply want to use the energy example to provide another perspective on the interaction between provincial and federal policies that have important implications for the assessment of the interregional effects of restrictive international trade policies and which raise significant questions about the meaning of “free trade” and about the scope of feasible trade policies. To do so, I focus on petroleum (recognizing that special issues are raised in other sectors, like coal).

Canadian petroleum production, like wheat production, is highly concentrated in western Canada. In the past, it has been argued that it is a sector in which Canada has a strong comparative advantage (Postner, 1975, pp. 105–16; Daly, 1979), although the validity of this assumption is subject to challenge now. It is also a highly regulated sector, and the pattern of regulation contains obvious potential for conflict between federal and provincial governments. Production is regulated primarily by provincial governments; exports are subject to federal quantitative controls and export taxes; and prices are the subject of a federal-provincial agreement.

The interregional aspects of the industry are also complex. While western-produced petroleum is a major export good, for eastern Canada, petroleum is also a major import good and under free trade Canada would undoubtedly continue to import petroleum for major parts of its eastern market. Given the importance of petroleum as an input in many production processes, and its importance in consumers’ budgets, opposing regional interests in the price of petroleum means that interregional conflicts over petroleum policies are probably inescapable.

The obvious issues are exacerbated by the fact that western provincial governments have a direct financial interest in production and pricing decisions. To the extent that property rights have not been alienated,

provincial governments have ownership rights in the basic energy-producing resources, and to the extent that the resources have been alienated, they have substantial powers for the assessment of royalties and direct taxes (Helliwell and Scott, 1981, p. 6–12). Federal-provincial conflict over the division of revenues is therefore inherent in the situation, but more subtle and complex policy issues are also involved. At the national level, issues of interregional equity in the price of petroleum, foreign ownership and national self sufficiency are raised. At the provincial level, concern over provincial revenue is complicated by concern over conservation and environmental protection on the one hand and the promotion of industrialization of the provincial economy through relatively low internal energy prices on the other.

We are directly concerned only with the implications of the energy sector for international trade policies. As in the case of agriculture, consideration of the energy sector in this context raises three problems.

- Conceptually, is policy with respect to the energy sector to be regarded as wholly separate from international trade policies in general, as is implied by the 1983 External Affairs discussion paper (Canada, External Affairs, 1983, p. 80–91)? Does a policy of free trade include free trade in energy?
- Analytically, Canada's petroleum policies involve complex inter-regional transfers through the tax system and through pricing policies. While orders of magnitude have undoubtedly changed, Scarfe's (1981) assessment is probably still valid:

The main effective subsidy in place [is] the subsidy from the oil producers and the producing provincial governments, particularly Alberta, to consumers right across the country. (p. 2)

This transfer is similar to the effects normally attributed to Canada's international trade policies; but, because it is a product of the dramatic change in the world price of petroleum in the 1970s, it is not reflected in the available calculations of the regional effects of alternative trade policies.

- The complex of national and provincial objectives with respect to energy cannot be pursued under a regime which involves free trade in energy. Politically, this probably means that the energy sector must be excluded. In any case, it is clear that whatever its constitutional jurisdiction with respect to international trade, the federal government does not have the political freedom, unilaterally, to include the energy sector in a free trade agreement.

Timber The British Columbia timber industry is included in this discussion to provide yet another perspective on the interaction between federal and provincial governments, and on the impact of provincial policy objectives in creating regionally specific international trade barriers. From a national perspective, the issues are less cosmic — large-

scale subsidies and interregional transfers are not directly involved. Yet the case is illustrative of the general issues.

The policy in question is quantitative control (at times bordering on prohibition), supplemented by a direct tax on the export of unmanufactured logs. Effectively, this control is implemented by the provincial government (with the active support of the federal government).²⁰ The direct effect of the control is to depress the domestic price of raw timber below the world price, and at times the gap is very wide (Haley, 1980).²¹ The objective is the encouragement of domestic manufacturing, providing an implicit subsidy to sawmilling and pulp and paper manufacturing. The subsidy is probably paid by the provincial government through lower stumpage fees (Pearse, 1976, pp. 310–11; Haley, 1980) on timber harvested on provincial lands.²²

The involvement of the provincial government in influencing the structure of the forest products sector is not confined to controls over the use of raw timber. International trade negotiations affecting provincial industries are monitored, and it would appear that effective pressure is brought to bear on these negotiations. Plywood manufacture is a particularly sensitive issue and it is striking that the relatively high tariff on the importation of softwood plywood (15 percent) was not affected by the Tokyo Round of the GATT negotiations (Canada, Revenue Canada, 1984).

The question of interregional subsidization does not arise directly in the timber case, as it does in the agriculture and energy cases, but two points stand out:

- There are sectors, other than the obvious and extreme cases of agriculture and energy, in which there is active provincial government intervention, which has the effect of creating barriers to international trade. As provincial governments take a more active role in developing industrial strategies, such intervention can be expected to increase. This will make it more difficult to negotiate liberal international trade agreements; the support of the resource processing regions cannot be automatically assumed.
- Traditional views that the economic structures of resource-based regions are fragile and exposed (McCann, 1982, p. 301) because they lack the tariff protection of eastern manufacturing regions must be carefully reexamined in the light of developments of recent years. It is possible that the protection to resource-processing industries in various regions may have effectively increased, while protection in the heartland has been decreasing.²³

Regions and International Trade Policy

The classic complaint of the resource-based regions of Canada with respect to international trade policy, as voiced by the government of British Columbia (1938), is:

[We have] to buy in a protected market and sell in an unprotected market or, in other words, to buy in the dearest market and sell in the cheapest. (pp. 273–74)

McCann (1982) notes that as a result:

The benefits from hinterland staples have remained chiefly in central Canada, while the resource-producing regions have been held in economic bondage to the banks and investment houses, the transport companies (particularly the railways), and the manufacturers of central Canada. (p. 301)

Historically, these regions have been strong advocates of a free trade policy for Canada. This advocacy continues, but we must now question the commitment of the governments of resource-based provinces to the cause of free trade, particularly if free trade is defined broadly to include the elimination of subsidy and subsidy-like programs, which affect local industries (particularly agriculture) and quantitative export controls (as in timber and energy). There is a danger that in western Canada free trade has come to mean free trade for eastern manufacturing industries with appropriate protection for western resource extraction and resource-processing industries.

Dangers of Economic Regionalism

There is another implication of this discussion that is also disturbing. If the policy problem is perceived as selling in unprotected markets while buying in protected markets, there are at least two paths that the search for a solution can take. On the one hand is the traditional path: lobby for reduced protection in the markets in which you buy. That is the traditional Western advocacy of free trade. On the other hand is the path of increased protection for regional manufacturing activities: the path of regional industrialization through restrictive international trade policies. In striving for industrialization, there is a danger that provincial governments will seek to impose restrictions on trade, both interprovincial and international, at least to the limits of their constitutional (and political) powers. The result can be a balkanized mercantilism in Canada with unfortunate results for economic efficiency, productivity and economic growth. The possibility that this is the favoured path of at least some provincial governments was apparent during the constitutional debates.

Conclusions: The Prospects for Consensus

What can be concluded from this survey about the prospects for a national consensus on international trade policy?

In the previous section, I suggest that a national consensus necessarily implies a consensus of provincial governments. Some of these governments have a substantial direct financial interest in international

trade policy, and most are also deeply involved in industrial policies, the outcome of which depends on international trade policy. The concept of an industrial strategy is commonplace at the provincial level, and accompanying it is an implicit, if not explicit, acceptance of a cumulative causation model of economic growth. As a result, the range of untouchable protected industries is probably expanding, and the provincial governments have taken on the role of effective political spokesman for these industries.

I also assume that the attitudes of provincial governments will reflect their perception of a province's economic interests. Unfortunately, that perception is likely to be strongly influenced by theories of regional adjustment and economic development, which have weak foundations. The major danger is that provincial governments in resource-based regions, while continuing to advocate free trade, will in fact adopt policies that I refer to as balkanized mercantilism.

Although the cumulative causation model provides a strong argument to the contrary, the economics literature, both theoretical and empirical, suggests that on balance all regions (with the possible exception of Quebec, but see Proulx, Dulude and Rabeau, 1979) stand to benefit from multilateral free trade. However, there are risks. The risks to central Canada are great, because the benefits of free trade rest on a complex industrial reorganization which is, as it were, a theoretical speculation (but one with strong evidence). The risks to the resource-based regions are relatively small. Their gains come through rather straightforward adjustments of prices without major industrial reorganization. But their hopes for subsidized industrialization would probably vanish.

Among the major beneficiaries of free trade would be the provincial governments of the resource-based regions and particularly the western provincial governments through the enhanced rents from their natural resources. Thus, there would seem to be a natural alliance in favour of multilateral free trade.

There are, however, strong forces militating in the other direction. On the one hand, the traditional political barriers are still there. The labour-intensive industries of Quebec are vulnerable to free trade, and politics suggests that they must be exceptions. With respect to the balance of the protected sector of the industrial heartland, the new analysis of gains through reorganization to take advantage of economies of scale and the American market is not fully accepted. The risks to individual firms and industries is high. On the other hand, provincial governments in the resource-based regions appear to see restrictive international trade policies (and conceivably restrictive interregional trade policies) as instruments to achieve industrialization and, in some cases, to protect significant processing industries. In this context, weight seems to be given to a variant of the cumulative causation model with the implication that industrialization is possible almost anywhere. In any case, there are

major sectors of the economy with strong regional concentrations, for which free trade seems to be a political impossibility, particularly agriculture and energy. As a result, I must be very pessimistic about the possibility of a national consensus on a free trade strategy for Canada, whether that be unilateral, bilateral (with the United States), or multilateral.

Notes

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1. The data are far from perfect. Apart from various statistical problems, including the reconciliation of data on shipments to the rest of the world with customs data on exports, it should be noted that the "destination" reported in these data is the first destination of the shipment. This may differ significantly from the ultimate destination, particularly if the initial recipient is a wholesaler. In this regard, particular attention should be paid to the high proportion of shipments with destinations within the province of origin. A new set of data on the origin and destination of shipments by wholesalers provides further insights into interregional trade. They show substantially the same pattern in the origin of goods acquired by wholesalers (i.e., a strong concentration from Ontario) and an even stronger concentration of sales within the region. See Statistics Canada (1983a, 1983d).
2. Trade in services is included in the interprovincial input-output model, which plays such an important role in the regional analysis of the Economic Council of Canada (1977) for their report *Living Together*. In the absence of data on these trade flows, services were grouped into those of a local nature (personal services, retail trade, construction) and those of a national nature (wholesale trade, transportation, finance). It was assumed that there was no trade in local services, and that trade in national services was proportional to trade in manufactured goods. This was a pragmatic assumption, which probably understated the role of Ontario and Quebec in the provision of services. See Statistics Canada (1980); and Canada, Department of Regional Economic Expansion (1976).
3. The Rowell-Sirois Commission's report deals with the issue rather briefly, primarily in the context of the effects of tariff increases during the Depression; see Canada, Royal Commission on Dominion-Provincial Relations (1940) Book 1, pp. 157–60; Book 2, pp. 230–33. However, MacIntosh's (1939; 1964, pp. 140–79) study for the Commission considers the issue in some depth, from a long-run perspective, and is very critical of the arguments of the western provincial governments, while conceding merit in the arguments of the Atlantic provinces. His conclusion that in the long run the western and central regions bore the cost of the tariff equally because the costs of the tariff were reflected in land values before settlement occurred is supported by Dales (1964, p. 6), who adds the paradoxical twist that, because tariffs have been lowered since original settlement, western farmers have been net beneficiaries of national tariff policies.
4. Including the regional structure of employment (Martin, 1975), the regional diffusion of innovations (Martin, Swan et al., 1979), regional patterns of comparative advantage (Boisvert, 1978; Copithorne, 1979) and, of related interest, the factor content of international trade (Postner, 1975) and the industrial structure of effective protection (Wilkinson and Norrie, 1975).
5. It is not clear if he expects this to result from the unhampered actions of the free market or from deliberate government policy (Blackman, 1974, p. 10). If the former, it is implausible; if the latter, it will be a result of provincial industrial policies, which

reduce rather than increase provincial incomes. In either case, his analysis is unconvincing.

6. We cannot tell what will happen to absolute prices. That depends on the adjustment process that follows. In particular, there must be some adjustment to maintain balance in flows of exports and imports (in the long run). This may require adjustments in the exchange rate. Tariffs and related devices will discourage imports; the exchange rate may have to adjust to provide some discouragement to exports (and some encouragement to imports), until trade is again balanced. As a result, export prices may fall in absolute terms. Other adjustments are also possible, e.g., through changes in the domestic price level. What is important for the problem at hand, however, is the change in relative prices.
7. There is an important difference between quantitative restrictions and foreign taxes, on the one hand, and some Canadian taxes, on the other, which is ignored in the following paragraphs. Canadian import tariffs, for example, generate revenue for the government to the extent that the taxed commodities continue to be imported. To the extent that this revenue substitutes for other tax revenue, the redistributive effects of the fisc must be known before the implicit cross subsidization arising from restrictive trade policies can be fully assessed. This problem does not arise with foreign taxes, quantitative restrictions or Canadian taxes which effectively exclude imports. It is these cases that are the focus of attention in the literature, in this survey and in political debates.
8. This assumes that Canada is "small" — that our trade policies have no effect on relevant world prices. Empirical evidence on this common assumption is limited but suggests that it is valid for imported goods but not for exports (Wurzburger, 1978; Appelbaum and Kohli, 1979). To the extent that Canadian trade restrictions alter world prices, Canada has monopoly power, which can be exploited to increase income in Canada, and the regional consequences may be different from those discussed in the literature. Provincial policies with respect to energy pricing and export seem partly designed to exploit what is thought to be some monopoly power in U.S. regional markets.
9. This procedure probably introduces a downward bias in estimates of price differentials. If a tariff is sufficiently protective that particular products are not imported, duty is not collected, and that tariff does not enter into the calculation of the average price differential. If higher tariff rates have more of a protective effect (which is probable, but not necessary), the estimate of the price differential will be biased downward. By assuming a bias of this sort, the major studies probably underestimate the regional cost of the Canadian tariff.
10. This is a significant underestimate, however. They included plywood and other protected forest products industries in the traditional export sector and estimated the net effect of free trade on the sector. Thus, some of the important effects of Canadian restrictive international trade policies are hidden. Protection for plywood may have particular importance in affecting British Columbia attitudes toward free trade in the future.
11. The analysis is heavily sociological but draws on a vast body of literature on the economic development of less developed countries. Matthews (1983) provides a clear and concise statement of what he calls the "dependency theory," and a useful bibliography of the major works in this tradition.
12. Pinchin applies similar concepts in exploring the impact of free trade on Ontario and Quebec, arguing that the "structure of manufacturing in Ontario and Quebec" cannot be explained "on the basis of factor endowments and factor intensities;" that "a region's endowments are often the product of a dynamic process of development;" and that free trade will further concentrate manufacturing employment in southern Ontario, "despite the apparent availability of substantially lower costs of labour, land sites and local taxes elsewhere in the country," and particularly in Quebec (Pinchin, 1979, pp. 18–19).
13. The literature on migration in Canada is extensive. A centre of controversy is the work of Courchene, which presents the market adjustment model in its most forceful form to explain the economic problems of the Atlantic provinces. See Courchene (1970, 1974,

- 1981), and Matthews (1981; 1983, pp. 56–76). The model is also assumed in analyses of western adjustment to the resource boom and resulting changes in relative fiscal capacities among provincial governments. See, for example, Norrie and Percy (1982); and Winer and Gauthier (1982).
14. A dimension of the impact of such policies on the interregional effects of trade policies is not considered here (or in the literature). Some policies, particularly those which originate with the federal government, involve subsidies out of general tax revenues of Canada. The financing of the subsidies thus affects the interregional distribution of income. Others are financed out of provincial revenues, so that the direct interregional impact is on prices and production in the region, although indirect effects of a more comprehensive nature will also occur through the effects on the balance of international payments and the exchange rate (or, alternatively, the price level).
 15. This is a gross simplification of the implications of the constitutional division of powers in this area. For a more complete discussion, see Helliwell and Scott (1981) or Lederman (1976).
 16. Contrary to the results for most (but not all) primary industries, Wilkinson and Norrie (1975, pp. 27–31) report relatively high rates of effective protection for agricultural industries, taking into account both tariffs and direct subsidies to the industries. The effects of quantitative restrictions are not included in the calculations (the subsidy implicit in the Crow rate also appears to have been excluded). Dauphin (1978, pp. 44–56) attempts to make allowance for non-tariff barriers in assessing the degree of protection by industry. His results confirm the general order of magnitude reported by Wilkinson and Norrie for the sector as a whole, and suggest startlingly high rates of protection for some products. Perhaps equally important, both the Wilkinson-Norrie and the Dauphin studies suggest very high rates of protection for industries engaged in the processing of protected agricultural products.
 17. The proposal to abolish or modify the Crow rate produced several estimates of the subsidy effect of that rate. They are summarized in Norrie (1983) and Norrie and Percy (1983).
 18. This is also a “traditional view.” See Mackintosh (1939; 1964, pp. 143–78). Although, as noted above, Dauphin reports very high effective protection for wheat production in subsidy and subsidy-like programs, he also reports that, among the traditional Canadian regions, the Prairie region had the most to gain from free trade. It is not clear from the text, but it seems apparent that the removal of the subsidies was not considered to be part of free trade for this calculation.
 19. Helliwell and Scott (1981) provide a convenient summary of the constitutional issues from an economist’s perspective. See also the papers in Scott (1976) and Ontario Economic Council (1980). The economics literature raises not only conventional questions about efficient pricing policies and possible trade-offs between equity and efficiency but also more subtle issues about the implications of the federal-provincial division of royalty income for the relative fiscal capacity of provincial governments, internal migration, and hence, indirectly, economic efficiency; see Boadway, Flatters and LeBlanc (1983), Winer and Gauthier (1982), and the literature cited therein.
 20. The origins of such a policy in Ontario are discussed in Nelles (1974, pp. 62–107) and Baggaley (1981, pp. 205–11). On contemporary British Columbia policy, see Pearse (1976, pp. 305–16) and Haley (1980).
 21. Haley attributes much of the price gap to a lack of competition on the Vancouver log market. However, this seems secondary to, and perhaps a result of, the lack of exposure of the log market to world markets.
 22. Copithorne argues that the rent foregone by the provincial government is captured by unionized workers in the form of above-equilibrium wage rates (Copithorne, 1979, pp. 61–72). If so, the manufacturing activities may receive no net subsidy (although decisions on technology and relative factor utilization, and particularly the intensity of utilization of the forests, would be affected).
 23. There is some suggestion of this with respect to the late 1960s and early 1970s in Wilkinson and Norrie (1975).

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U.S.-Canada Free Trade: A View from the East

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The structure of the Atlantic provinces' economy has been studied in minute detail and the economic problems of the region have been catalogued and well advertised in many publications and forums. Therefore, it should not be necessary to cover this ground again except to note that the persistence of significant disparities in income, employment and other indexes of economic performance and well-being tend to dominate all discussion of public policy in the region.

When the free trade option is presented, whether it concerns only trade with the United States or with some broader grouping of countries, discussion inevitably focusses on how more liberal trading relations might affect employment. While decision makers and scholars in other parts of Canada may concern themselves with issues such as degree of foreign ownership, political independence, economic welfare and efficiency, and so on, the principal concern of most Maritimers and Newfoundlanders is jobs. Would free trade increase the rate of economic growth and create new employment opportunities, and would this help reduce disparities? If this question could be answered in the affirmative, free trade would surely be embraced enthusiastically no matter what the other effects might be.

Although potential long-term employment and growth effects of freer U.S.-Canada trading arrangements are the main concern of residents of the Atlantic provinces, certain other aspects of the matter should be noted.

The elimination or reduction of Canadian barriers to imports would benefit consumers and producers in the Atlantic provinces immediately by increasing choice and reducing the prices of many consumer goods and reducing the cost of some inputs. However, the magnitude of potential gains should not be exaggerated. Factors such as distance from

suppliers and transportation costs, size and dispersion of markets and distribution costs, commodity and other taxes, and degree of competition are probably as important determinants of existing cost and price differentials as are trade barriers.¹ Still, other things being equal,² the removal of Canadian tariffs and other trade barriers could increase significantly the economic well-being of consumers in the Atlantic region.³

Free trade with the United States would have little direct impact on goods-producing industries currently located in the Atlantic provinces. The overwhelming majority of viable businesses in the region fall into two classes. The largest group consists of small-scale operations that serve local markets only. For a variety of reasons — transportation costs, nature of product, market-orientation, and other locational factors — these businesses do not compete with suppliers elsewhere, neither those located in foreign countries nor those based in other parts of Canada. In the second group are the resource-based industries. They supply primary products, such as minerals and unprocessed seafood products, and primary manufactures such as wood pulp, lumber and primary metals to markets mainly outside Canada, and so they are, have always been, and will continue to be strongly export-oriented. Producers supplying local markets gain no advantage in the domestic market from Canadian protection, while producers in resource-based industries compete successfully in the American market.⁴ Therefore, these two groups of businesses, which employ a large fraction of all workers in goods-producing industries, supply most of the goods produced and add most to the value of output, would be affected very little or not at all by the complete elimination of barriers to U.S.-Canadian trade.

The protected sector in the Atlantic region is very small.⁵ A few businesses produce import substitutes such as textiles, clothing, some processed foods and a limited range of other products. These manufacturers benefit from Canadian protection and might not be competitive in a Canadian-American free trade area. In this case, they would be compelled to reorganize or face elimination, perhaps via the traditional route of takeover and closure. Even if most of them failed to survive the transition to freer trade, the net impact on employment and output would be negligible.

A matter of far greater concern would be the fate of those firms and industries that have been unable to compete successfully even inside the heavily protected Canadian market. Many have been funded by government and kept operational for essentially sociopolitical reasons. The massive injection of public funds has kept some of them, such as the Sydney steel mill, from closing down entirely, while preferential and discriminatory procurement policies of federal and provincial governments have sustained others, for example, the Trenton car works. In practice, financial assistance to these declining or non-competitive man-

ufacturers has served as a substitute for direct social assistance payments to unemployed workers. Much the same can be said of many other government socio-economic policies, including special eligibility requirements for unemployment insurance, regional development grants, subsidies to boat builders, and so on. Some programs sustain fishermen and other resource industry workers who are normally employed for only a few weeks or months each year. Others permit firms to continue in operation and provide employment when they would otherwise close down or locate elsewhere. Businesses that benefit from this government largess⁶ employ a substantial number of workers and frequently are the only employers or potential employers in their communities. It is important to know in advance the provisions⁷ that might be included in a free trade agreement to cope with problems of this sort. If the case for free trade is to be based on efficiency criteria, as surely it must be, the ad hoc approaches to regional disparity that have characterized Canadian policy making in the past would no longer be tolerable. Regional policies that do nothing more than subsidize and sustain uneconomic production would hardly be consistent with the primary goal of free trade — namely, increased allocational efficiency.

This brings us to the central issue, the long-term impact of free trade on the Atlantic provinces. As noted above, economic disparity has been and remains the chief concern of people in the region. The disparity problem dates from the nineteenth century and was mainly a consequence of the failure to adapt to technological change and the westward expansion of Canada. Disparities exist because the Atlantic provinces suffer a number of serious disabilities in the context of the Canadian economy. The question then is whether free trade with the United States would remove or lessen these disabilities, make the region more attractive to investors, and provide increased employment opportunities.

For most of the period since Confederation, the Atlantic region has been rated as an undesirable location for business firms that market their goods domestically.⁸ This is not really surprising since the Atlantic provinces are situated at the eastern periphery of the nation, far from the principal population centres and markets, the resource endowment is certainly not generous, the local market is far too small to support even branch plants of most mass-production industries, and the local population is widely dispersed. Even business firms that might not be deterred from locating in the East because of distance from markets, high transport costs or resource limitations have been reluctant to establish production facilities in the region. Labour market deficiencies are often cited as a deterrent. The labour market is fragmented and large segments of the labour force are poorly trained; workers with specialized skills cannot always be hired and in-house training programs are expensive to implement and do not always pay off. Another serious problem is the unavailability of many producer services; delays in obtaining spare parts

and service for equipment can add substantially to production costs. In short, the risks of locating production facilities in the Atlantic provinces have generally been considered too high for many potential investors and alternative locations have been selected.

Unfortunately, there is little evidence to suggest that the balance of locational advantages (for the Atlantic region) would be much altered by a free trade agreement with the United States. The resource base would not be improved, labour force deficiencies and disabilities would remain, and the costs and risks of doing business in the region would remain high. Still, the situation is not entirely hopeless. If the huge northeastern United States market were opened to Canadian producers, manufacturers of some goods might find locating in the Atlantic provinces economically feasible. There are reasonably good road transportation and sea links between the New England states and New Brunswick, and remoteness from markets would therefore be somewhat less disabling than it is today. Moreover, there is a pool of potential workers. Many are unskilled, particularly working-age women, for whom the labour force participation rate in the region is well below the national level, and they may be willing to accept employment at below national wage rates. Experience suggests, however, that this advantage would be only temporary. There is even a slight chance that some additional processing of resources (before they are exported) might become feasible. However, it is highly unlikely any of these changes would take place spontaneously. A well-conceived and generously financed regional development strategy would be required, and even then success would be far from certain. The introduction of generous, possibly overgenerous, incentive programs and other attempts to devise a strategy and to implement policies for reducing regional disabilities have not met with much success to date. Overall, prospects for an economic revival in the Atlantic region are not very bright, with or without free trade.

The formation of a free trade area with the United States would do much to redress a historical grievance and at the same time remove a major obstacle to intelligent discussion of the economic difficulties of the Atlantic provinces. Maritimers have argued for a century that they were "short-changed" by Confederation, that Canadian protection distorted "natural" trade patterns and provided a captive market in the region for the output of inefficient producers in central Canada, and that consumers in the region have been forced to bear a disproportionate share of the costs of protection while realizing few of the benefits. Simplistic as this argument may seem to other Canadians, it is deeply imbedded in the thinking of many people in the region. If trade barriers were eliminated, rational analysis could be substituted for central Canada "bashing" and the economic problems and potential of the Atlantic provinces could be assessed in realistic terms, to the benefit of all concerned.

One other potential long-term effect of a free trade agreement with the United States should be noted. Historically, high levels of economic activity in the rest of Canada have benefitted people in the Atlantic provinces directly, and indirectly through increased employment opportunities in the more prosperous areas of the country. If the rate of economic growth in central and western Canada rose as a result of trade liberalization and if the demand for labour increased, there might be a faster and smoother labour market adjustment in the Atlantic region in that there would be greater incentive for Maritimers and Newfoundlanders to migrate to those parts of Canada where economic opportunities were greater. This would probably do more to enhance economic welfare in the Atlantic region and in Canada generally than all the regional development strategies so far devised.

The only conclusion that can be drawn, given the evidence available, is that free trade with the United States would have little immediate or direct impact on the Atlantic provinces. Only a small number of existing businesses would be affected one way or the other. The rate of economic growth might rise modestly, but long-term growth prospects are not especially promising. Still, to the extent that a consensus exists in the region, it is almost certainly favourable to trade liberalization. In particular, there is a strong sentimental attachment to the idea of free trade with the United States.⁹ While free trade would not be a panacea for the ills of the region, it would not take much of a selling job to convince residents of the Atlantic provinces that it offers perhaps the best prospect for an improvement in their economic well-being.

Notes

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1. Many goods and services are priced much higher in the Atlantic provinces than in most other parts of Canada. Also, there are quite significant price differentials within the region.
2. This is an important caveat, as will be noted later.
3. Estimates of the consumption costs of Canadian protection have ranged as high as 4 to 5 percent of Gross Regional Product. See John F. Earl, *The Atlantic Provinces: Protection and Free Trade* (Halifax: Atlantic Provinces Economic Council, 1973).
4. Primary goods and primary manufactures of the type exported from the Atlantic provinces are admitted to the United States duty free or are dutiable at very low rates. American suppliers such as potato shippers and lumber producers complain that Canadian producers compete unfairly and regularly lobby Congress for protection, but fortunately their pleas are seldom heeded.
5. Most of the sheltered industries in the Atlantic provinces disappeared long ago, victims of competition from suppliers located in the more dynamic and populous parts of Canada. The situation faced by manufacturers in the Maritimes during the late nineteenth and early twentieth century was equivalent to integration into an extended free trade area with a much larger and more powerful partner. Unfortunately, the adjustment process in the Maritimes was highly imperfect and the experience quite painful. In fact, the regional economy never fully recovered from the shock.

6. Net federal government spending in the Atlantic provinces is currently more than \$2,500 per resident.
7. Even more important would be the impact free trade might have on federal transfer programs, in particular, equalization payments. One of the justifications for transfers is that Canadian protection redistributes income from consumers in eastern Canada to producers in central Canada. If a free trade agreement were negotiated, the case for these transfers would be weakened. Residents of the Atlantic provinces could end up no better off, and perhaps even worse off, if free trade forced cuts in transfer payments and these reductions exceeded consumption and efficiency gains.
8. There was a considerable amount of new investment in textile, clothing, footwear and metal fabricating industries late in the nineteenth century, but gains could not be consolidated.
9. This sentiment dates from pre-Confederation Reciprocity Treaty days when Maritimers enjoyed relative prosperity.



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This is the third of six volumes dealing with **International Trade** (see list in back of book), included in the Collected Research Studies of the Royal Commission on the Economic Union and Development Prospects for Canada.

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Frontis

1-2

43-64

67-102

295-310

313-72

222-4

